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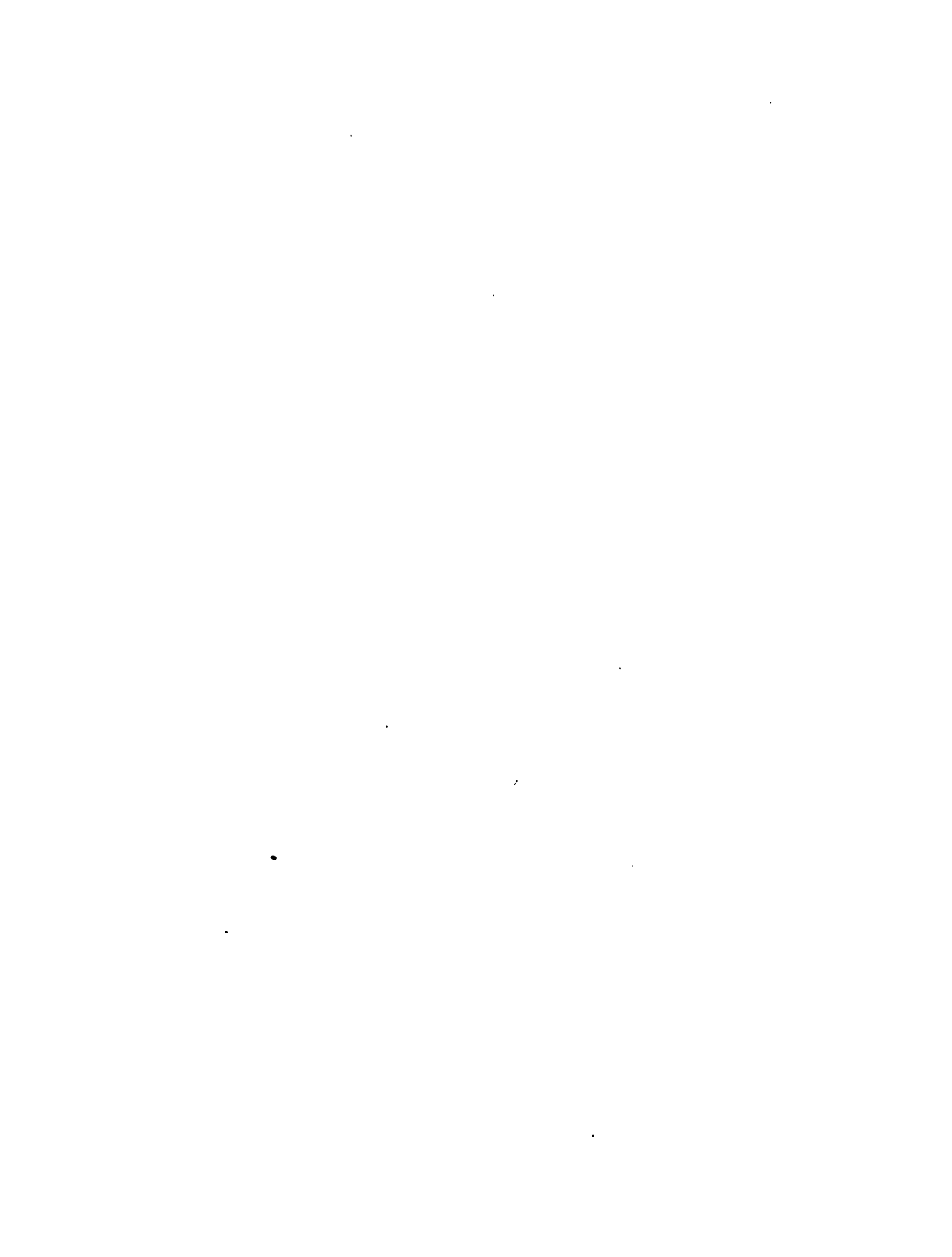
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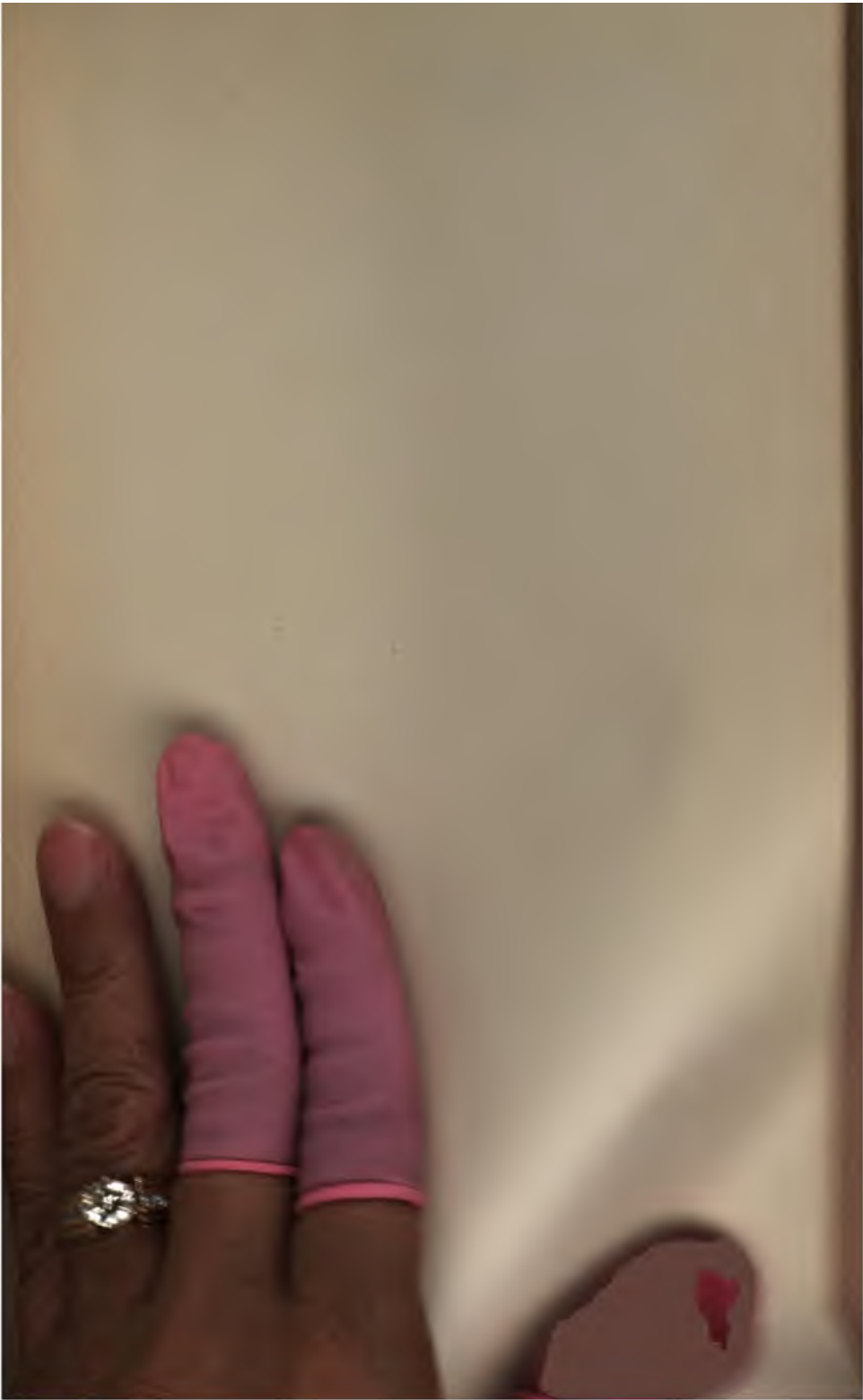
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Archæological Institute of America,

SECOND ANNUAL REPORT

OF THE

EXECUTIVE COMMITTEE,

1880-81.

PRESENTED AT THE ANNUAL MEETING OF THE
INSTITUTE,

BOSTON, MAY 21, 1881.

CAMBRIDGE:
JOHN WILSON AND SON,
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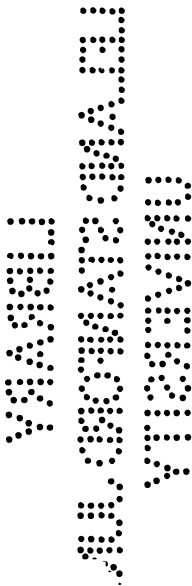
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CONTENTS.



EXECUTIVE COMMITTEE	5
REGULATIONS	7
LIST OF LIFE MEMBERS	9
LIST OF ANNUAL MEMBERS	11
ANNUAL REPORT OF THE EXECUTIVE COMMITTEE	17
<hr/>	
APPENDIX	41

6
19

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Executive Committee, 1880-81.

CHARLES ELIOT NORTON, *President.*

MARTIN BRIMMER, *Vice President.*

FRANCIS PARKMAN.

W. W. GOODWIN.

H. W. HAYNES.

ALEXANDER AGASSIZ.

WILLIAM R. WARE.

O. W. PEABODY, *Treasurer.*

E. H. GREENLEAF, *Secretary.*

REGULATIONS

ADOPTED MAY 17, 1879.

1. The Archæological Institute of America is formed for the purpose of promoting and directing archæological investigation and research, — by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A.M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

LIST OF LIFE MEMBERS
OF THE
ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Alexander Agassiz	Cambridge.
William Amory	Boston.
Elisha Atkins	”
E. Pierson Beebe	”
Charles S. Bradley	Providence.
Mrs. Gardner Brewer	Boston.
Martin Brimmer	”
William S. Bullard	”
George B. Chase	”
Thomas M. Clarke	Providence.
G. W. W. Dove	Andover, Mass.
William Endicott, Jr.	Boston.
Charles Fairchild	”
Ezra Farnsworth	”
John M. Forbes	”
M. F. Force	Cincinnati.
Rowland Hazard	Providence.
Henry L. Higginson	Boston.
*Miss Alice S. Hooper	”
Mrs. Samuel Hooper	”
Samuel Johnson	”
Henry P. Kidder	”
Miss E. F. Mason	”
Miss Ida N. Mason	”

* Deceased.

John W. McCoy	Baltimore.
D. O. Mills	New York.
Clarence B. Moore	Philadelphia.
Otis Norcross	Boston.
Charles Eliot Norton	Cambridge.
Robert Treat Paine	Boston.
Francis E. Parker	”
Oliver W. Peabody	”
Richard Price	”
C. A. S. Richards	Providence.
Stephen Salisbury, Jr.,	Worcester.
Philip H. Sears	Boston.
Mrs. G. Howland Shaw	”
Quincy A. Shaw	”
Edward Spencer	Baltimore.
Royal C. Taft	Providence.
Clement A. Walker	Boston.
Samuel D. Warren	”
William B. Weeden	Providence.

LIST OF ANNUAL MEMBERS.

Francis E. Abbot	New York.
S. L. Abbot	Boston.
William F. Allen	Madison, Wis.
Fred. L. Ames	Boston.
James Barr Ames	Cambridge.
Thomas G. Appleton	Boston.
William Ashburner	San Francisco.
*Gilbert Attwood	Boston.
Charles Babcock	Ithaca, N. Y.
J. T. Bailey	Boston.
Ad. F. Bandelier	Highland, Ill.
Francis Bartlett	Boston.
Mrs. E. H. Bigelow	”
Timothy Bigelow	”
William Sturgis Bigelow	”
Alexander Bliss	Washington.
Charles P. Bowditch	Boston.
H. P. Bowditch	”
Erastus Brainerd	Philadelphia.
Miss C. A. Brewer	Boston.
W. N. Bullard	”
James B. Campbell	Charleston, S. C.
Elmer H. Capen	Somerville, Mass.
L. P. di Cesnola	New York.
Charles F. Choate	Cambridge.
Edward Clarke	Washington.

* Deceased.

Joseph H. Coates	Philadelphia.
Samuel C. Cobb	Boston.
Benjamin R. Curtis	"
George William Curtis	New York.
C. H. Dalton	Boston.
Henry Davenport	"
Thomas Davidson	"
Horace Davis	San Francisco.
Franklin B. Dexter	New Haven.
F. Gordon Dexter	Boston.
E. S. Dixwell	Cambridge.
William E. Dodge, Jr.	New York.
William E. Dorsheimer	"
Thomas Durfee	Providence.
Edmund Dwight	Boston.
Louis Dyer	Cambridge.
Ralph Waldo Emerson	Concord.
Dana Estes	Boston.
Glendower Evans	Cambridge.
Miss Alice C. Fletcher	New York.
William H. Forbes	Boston.
William Gammell	Providence.
Edward G. Gardner	Boston.
John L. Gardner, Jr.	"
D. C. Gilman	Baltimore.
Edwin L. Godkin	New York.
J. L. Goodnow	Boston.
W. W. Goodwin	Cambridge.
Horace Gray	Boston.
George Z. Gray	Cambridge.
Samuel A. Green	Boston.
Edward H. Greenleaf	"
Richard C. Greenleaf	"
W. W. Greenough	"
Henry S. Grew	"
William Grosvenor, Jr.	Providence.
E. W. Gurney	Cambridge.
W. G. Hale	Ithaca, N. Y.

Albert Harkness	Providence.
Mrs. E. G. Hartshorn	"
E. B. Haskell	Boston.
Samuel Foster Haven	Worcester, Mass.
Henry W. Haynes	Boston.
T. W. Higginson	Cambridge.
R. M. Hodges	Boston.
C. D. Homans	"
Edward W. Hooper	"
E. N. Horsford	Cambridge.
H. O. Houghton	Boston.
John T. Humphreys	Greensboro, N. C.
Ernest Jackson	Boston.
Francis Jaques	"
C. Jenkins	"
Reverdy Johnson	Baltimore.
S. R. Koehler	Boston.
Thomas Lang	"
Amos A. Lawrence	Brookline, Mass.
Richard H. Lawrence	New York.
W. C. Lawton	New Bedford, Mass.
James S. Little	Boston.
Henry Cabot Lodge	"
W. P. P. Longfellow	Cambridge.
Charles G. Loring	Boston.
Caleb William Loring	"
Thornton K. Lothrop	"
Seth Low	New York.
Augustus Lowell	Boston.
George G. Lowell	"
John Lowell	"
Thomas W. Ludlow	New York.
Henry G. Marquand	"
Miss Abby W. May	Boston.
David J. Miller	Santa Fé, N. M.
Joseph A. Miller	Providence.
Charles H. Moore	Cambridge.
Lewis H. Morgan	Rochester, N. Y.

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Samuel Johnson	”
Henry P. Kidder	”
Miss E. F. Mason	”
Miss Ida N. Mason	”

* Deceased.

among the Ancient Mexicans;"¹ and "On the Social Organization and Mode of Government of the Ancient Mexicans."²

Thus qualified by erudition, Mr. Bandelier is no less qualified by character for the task of investigating the life and traditions of the descendants of the people whom the Spaniards found inhabiting the countries which they conquered and occupied. His energy and zeal, his capacity of adapting himself to circumstances, his readiness to endure the hardships incident to the performance of his task, his unusual linguistic attainments, his trained faculty of observation, form a combination of qualities such as warrant the value of the work he may perform in the exploration of the ancient remains, and the observation of the actual life of the Indians of the Pueblos of the South West.

The preliminary arrangements having been made, Mr. Bandelier proceeded to New Mexico in August of last year. The first investigation in which he engaged was that of the great ancient deserted pueblo of Pecos, and the results of his work at this site are now in your hands in his interesting report upon Pecos, in the first of the American Series of the Papers of the Institute. Your committee feel justified in regarding this report as a highly valuable contribution to the knowledge of American antiquities and history.

¹ In the Eleventh Annual Report of the Peabody Museum, 1878, pp. 385-448.

² In the Twelfth Annual Report of the Peabody Museum, 1880, pp. 557-699.

After completing this work, Mr. Bandelier determined to examine the important group of inhabited and deserted pueblos in that part of the valley of the Rio Grande bounded on the north by the Rito de los Frijoles, and on the south by San Domingo, extending west into the Sierra de San Miguel, and to the foot of the Sierra del Valle, and east over the plateau between Santa Fé and the river itself, a distance of about thirty miles. After a residence of a week or two in the close vicinity of the large, inhabited pueblo of San Domingo, — where, through the friendly relations which he established with the Indians, he obtained an excellent opportunity for observation of their modes of life, as well as for a complete survey of the pueblo, — he went early in October to the pueblo of Cochití, into which he was received by the Indians — a branch of the Queres tribe — on terms of entire familiarity and unusual confidence. Remaining here for two months, he was enabled not merely to study to great advantage the internal organization of the pueblo, but also to acquire much valuable information concerning the institutions, traditions, and customs of the people, beside investigating many of the ruined pueblos and other remains of former occupation in the adjacent district.

In a letter dated Cochití, Nov. 27, 1880, he wrote: —

“My relations with the Indians of this pueblo are very friendly. Sharing their food, their hardships, and their pleasures, simple as they are, a mutual attachment has formed itself, which grows into sincere affection. They begin to treat

me as one of their own, and to exhibit toward me that spirit of fraternity which prevails among them in their communism. Of course they have squabbles among themselves, which often reveal to me some new features of their organization; but on the whole they are the best people the sun shines upon. How long will they last? They progress slowly, but still they are progressing. God preserve them from any attempt at rapid 'Americanization!' It would be their death-blow.

"At night, if they do not come to see me, to sit around very modestly without interruption of my work, I sometimes go to call on some of my nearest friends among them, especially the Lieutenant of the 'Capitan della Guerra,' Victoriano, a young man with a small family. Squatting on one of their low stools, hewn out of one block, or stretched out side by side on *serapes*, we chat and smoke, — water, out of the common *tinaja*, being the only refreshment offered and expected. His wife and his sister go about, mingling freely in the conversation, — for both sexes are on a footing of great equality. We talk Spanish, and sometimes a word in Queres. The girls tease me about my defective pronunciation."

In another letter he says: —

"The Indians talk freely with me. Juan José has begun to dictate to me in Queres the history of Montezuma. I maintain my original position, namely, that it is a stem of Catholic ideas, and of the history of the Conquest, and have even the proof of it. The document will be at least linguistically interesting. With the assistance of an Indian friend who has been at the school of the Christian Brethren at Santa Fé, I am beginning to assort my linguistic material grammatically."

His friendly relations with the Indians opened the way for Mr. Bandelier to become acquainted with

much in their habits and superstitions usually kept concealed from strangers. Their social organization, as far as observed, has revealed the so-called Gentile system still existing among them, though no longer regulating the order of their government. This change appears to be due, not to any independent progress of the Indians, but to the disturbing influence of prolonged contact with the white race and the pressure of political society. The arts and industries of the aborigines show an analogous change, in the shape of an advance from the almost exclusive use of stone to the knowledge of simple implements of civilized husbandry and mechanics. Their mode of life has correspondingly advanced out of an absolute, bee-hive-like communism into freer development of individuality, and stronger affirmation of the family as against the consanguineous cluster, although the basis of living is still decidedly communal. The democratic nature of their governmental institutions is strongly marked. A nominal recognition of the Catholic Church has not proved incompatible with the survival of original paganism, with its more or less obscene dances, and its worship of the sun and the elements, as well as of striking objects of nature. The traditions of the natives indicate not only migrations from a certain direction, but also the character and mode of these migrations, which were slow, and caused and guided by the accidents of warfare between the tribes, as well as by the periodical changes in the rain-fall. Thus the great

number of ruined pueblos found becomes an evidence not of simultaneous, but of successive occupation. During his residence at San Domingo and Cochití Mr. Bandelier was able to explore some twenty-five ruins, most of them heretofore unknown, and to make ground-plans and diagrams of them. In connection with the present houses of the pueblos, the general features of life of their former inmates are fully explained. The cliff-houses and cave-dwellings appear, at least in this region, to have been normal pueblos, hollowed out of the rock, which from its friable nature, made it easier to burrow into it than to build outside it. Considerable collections have been made at each point, a part of which have already been deposited in the Peabody Museum of American Archæology at Cambridge, where it is proposed, to send the remainder as they are received from New Mexico.

In the course of his explorations Mr. Bandelier has made a curious and novel discovery. In two places stone enclosures were found outside the pueblo, but still in such proximity as to establish an undoubted connection, containing life-sized images of the puma, cougar, or mountain-lion. These images, cut out of the solid rock and resting on the ground, were ascertained to be the idol of the god of the chase, "Shyayag," of the Queres Indians. Twice the mode of worship has been actually witnessed. Aside from the ethnological value of this discovery, the bearing of it on the archæology of New Mexico is of great importance.

Excellent photographs of these and other interesting subjects have been taken, which will be engraved for Mr. Bandelier's subsequent reports.

Toward the end of December Mr. Bandelier returned to Illinois, with the intention of going back to New Mexico in January to continue his work there. But just at this time intimations were received by your committee from Mr. A. Thorndike Rice, the director in America of the Lorillard expedition to Mexico and Central America, in charge of M. Desiré Charnay, that it was desired to send out a competent American assistant, if such an one could be found, to join M. Charnay's party. After some correspondence an agreement was made between your committee and Mr. Rice, by which they undertook to pay the salary of such an assistant for six months, while on the other hand his expenses in the field were to be borne by the promoters of the Lorillard expedition. As the scheme on which Mr. Bandelier had been sent to New Mexico originally contemplated the gradual survey and exploration southward, through Mexico and Central America, of the chief remains of Indian civilization in these regions, your committee suggested to Mr. Bandelier that it might be well for him to take advantage of the opportunity thus offered for examining that portion of these countries embraced in the scope of the Lorillard expedition, under the unusually favorable circumstances afforded by the liberal manner in which it was conducted. This change of plan involving the interrup-

tion of Mr. Bandelier's useful and important work in New Mexico, the decision in respect to it was left to him. After due consideration he determined to accept the proposal and, on the last of February, left New Orleans for Vera Cruz. On his arrival there he learned that M. Charnay had disbanded his expedition for the next six or eight months, and was then in the city of Mexico, and about to return to France. Mr. Bandelier accordingly went to the city of Mexico, where he was received with great cordiality by M. Charnay, and, after consultation with him, determined to remain for the present in Mexico, and to pursue his investigations there. The letters which your committee have since then received from him give evidence that results of interest may be confidently expected from his labors in this region.

Your committee hope to be able during the coming year to publish his report upon San Domingo, Cochití, and the ruins he has explored in New Mexico. The publication of the results of his work in Mexico will, in accordance with the terms of their agreement with Mr. Rice, be delayed till after the publication by M. Charnay of his own account of his expedition. Whether Mr. Bandelier will continue more than six months in Mexico, and on M. Charnay's return join him in fresh explorations, or whether he will, before the end of the present year, renew his interrupted investigations in New Mexico, is as yet undecided.

While thus employed in promoting the better knowledge of American antiquity, your committee have endeavored to fulfil the charge committed to them of engaging in work for the advancement of classical learning. In their last annual report it was stated that a site for exploration had been selected "where they have every confidence that discoveries of interest may be made, and they are prepared to begin work upon it so soon as the members of the Institute, or the public at large will supply them with the requisite means." In order to obtain these means a committee was appointed, in accordance with a vote passed at the last annual meeting, to solicit subscriptions, consisting of Mr. Francis E. Parker, Mr. Henry P. Kidder, Mr. Samuel D. Warren, Mr. Henry L. Higginson, Mr. Edmund Dwight, who, together with the President and Vice-President of the Institute, undertook the work, and in the course of a few weeks succeeded in obtaining a sum exceeding five thousand dollars. To the gentlemen who composed this committee the special thanks of the Institute are due.

The sum thus obtained, though not so large as your committee would have desired, was sufficient to warrant them in proceeding with the undertaking which they had proposed. A request was made to the Department of State at Washington that application should be made to the Ottoman Government, through the official representative of the United States at Constantinople, for the granting of a firman to the Institute by

which its agents might be authorized to investigate the site of the ancient city of Assos, on the south-western corner of the Troad, opposite the island of Mytilene. The Department of State at once complied with this request, and your committee desire to express in the strongest terms the obligation of the Institute to Mr. Evarts, Secretary of State, and to Mr. Hay, the Under-Secretary of State, for the instructions issued in the first instance to Mr. Heap, Consul-General, and acting *Chargé d' Affaires* of the United States at Constantinople, and afterwards to Mr. Longstreet, appointed in the course of the summer as Minister Resident in Turkey; and also to Mr. Heap and to Mr. Longstreet for the zeal and interest manifested by them in the carrying out of these instructions. Meanwhile, in the expectation of receiving the firman, your committee proceeded to organize the proposed expedition.

The site of Assos is described from personal observation, and an account of what has been hitherto known of the city is given by Mr. Joseph Thacher Clarke, in his "Archæological Notes on Greek Shores," in the volume of the papers of the Institute for 1879-80. It appeared from Mr. Clarke's examination of the remains of the ancient city that results of archæological importance could hardly fail to be obtained from a careful investigation of them. There was, indeed, no reason to anticipate any such brilliant discoveries, or any such finds of treasure, as rewarded the labors of Dr. Schliemann, General di Cesnola, or Herr Humann.

But although the prospect of such novel and, in great part, chance results might be lacking, on the other hand it was certain that important gains to the knowledge of antiquity would accrue from a careful survey and thorough investigation of the ruins of Assos. The remains of the temple upon the Acropolis present certain interesting architectural problems that await solution, and there is a possibility that further fragments of its curious sculptured frieze may yet be discovered. The ancient city walls afford an opportunity, from their extent and preservation, second to those of no other city of classical antiquity, for the study of the methods of fortification and defence adopted by the Greeks. The remains of the theatre — not long since among the most perfect of the kind, but of late greatly diminished and injured by the Turks, who have made use of them, as well as of the walls, as a quarry of hewn stone for the construction of the new docks at the Arsenal in Constantinople — require careful examination and measurement. The numerous sarcophagi and ruins of large mausoleums outside the walls, are worthy of far more attention than they have hitherto received from such travellers as have visited the site, while the ground-plan of the ancient city itself, whose remains give, according to Colonel Leake, perhaps the most perfect idea of a Greek city anywhere to be found, needs to be thoroughly investigated and laid out. Even if not a single object of ancient art, and not a single inscription, were to be found either above the

soil, or buried in it, it appeared to your committee that there was enough to be gained for archæology in the investigations already mentioned, to justify the selection of the site as the field of work for the first American archæological expedition to the Old World.

They determined to entrust the charge of the expedition to Mr. Clarke, and to associate with him his companion in his previous journeys in classical regions,— Mr. Francis H. Bacon. The character and training of these gentlemen gave assurance that the objects of the expedition would be accomplished with exceptional ability. Mr. Clarke and Mr. Bacon undertook the work with hearty and self-sacrificing zeal. But the work was of such scope that they needed competent assistants to secure its performance within a moderate time. The funds at the disposal of your committee did not, however, warrant the offer of salary to these assistants, and an appeal was issued asking for volunteers ready to take part in the expedition at their own cost, saving only their actual support in the field. The answers to this appeal were numerous. More than fifty applications were received from young men in all parts of the country—from New England to California—desirous to join in the work. Most of the applicants had no other qualifications than those of good-will and a spirit of enterprise. A few of them, on the contrary, gave such account of themselves as indicated that they were likely to be valuable assistants. The selection from among these volunteers was matter of careful deliber-

ation, and the following gentlemen were finally chosen as members of the expedition: Mr. Maxwell Wrigley, of New York, engineer and architect; Mr. Charles Howard Walker, of New York, architect; Mr. Edward Robinson of Boston, a graduate of Harvard College of 1879; and Mr. Charles Wesley Bradley, of Cambridge, a graduate of Harvard College of 1880. In addition to these, who formed, with Mr. Clarke and Mr. Bacon, the regular staff of the archæological expedition, was Mr. Joseph Silas Diller, of Nebraska, a bachelor of science of the Lawrence Scientific School of 1879, and a holder of one of the Parker Fellowships of Harvard College, who was to join the corps for the purpose of making a geological survey of the region around Assos. Your committee esteem it fortunate for the Institute to have been able to secure the services of these young men, whose character and qualifications are such as to justify entire confidence in the satisfactory performance of the work entrusted to them. The admirable spirit with which they are animated, and the generous ambition which has led them, at their own cost, and at an immediate and considerable sacrifice of material interest on the part of several of them, to devote themselves to this work for the sake of the increase of knowledge, deserve the most honorable recognition.

Owing to the inclemency of the winter and early spring in the Troad, it was determined to put off the beginning of actual operations till toward the end of

March or the beginning of April of this year. This gave time for the thorough discussion of plans, and the careful making of preparations. Early in January Mr. Clarke, Mr. Bacon, and Mr. Wrigley sailed for Europe. In March they reached Mytilene, and proceeded to arrange for the commencement of active labors at Assos.

On the 15th of December last your committee received from the Department of State the information that Mr. Heap, *Chargé d'Affaires, ad interim*, of the United States at Constantinople, had written to the Department on the 19th of November that he had the assurance of the Minister of Public Instruction that the firman requested by the Department of State for the Institute would be soon granted, and that he had paid the customary fees for its issue. Two months later, on the 19th of January, Mr. Longstreet, Minister Resident at Constantinople, wrote to Mr. Evarts, "I yesterday had the honor of an interview with the Prime Minister, at which His Highness assured me that a firman in favor of the Archæological Institute would be granted; or, to repeat his words, 'We cannot refuse these concessions in the interest of the arts and sciences.'"

The issue of the firman, however, being still delayed at the incoming of the new administration, the attention of the Department of State was again called to the matter, and on the 18th of March, Mr. Blaine addressed a note to Aristarchi Bey, Minister of Turkey at Wash-

ington, requesting him to make such representations to his Government as should induce it at an early date to fulfil its promise in respect to the issue of the desired firman. Your committee believe that the energetic intervention of the Department of State will secure in good season the fulfilment of the pledge given by the Prime Minister of Turkey. To doubt this would be not only to call in question the good faith of the Turkish administration, but to suppose that it would gratuitously refuse compliance with a request urged by a power with which it holds friendly relations, and to which it is under long-standing obligation. The thanks of the Institute are due to Mr. Blaine for his prompt and effective action, and for the interest he has manifested in the work which it has in hand.

Besides the equipment which was provided by the Institute for the expedition, your committee are under obligation to Professor Shaler, of Harvard College, for the loan of an excellent transit instrument, and to General Hazen, Chief Signal Officer, Washington, for a supply of instruments for meteorological observation, including one mercurial barometer, two aneroid barometers, two dry-bulb thermometers, two wet-bulb thermometers, one rain gauge, and one anemometer. Observations are to be made three times daily, and the semi-monthly report of them will appear in the "International Bulletin," published from the Chief Signal Office of the War Department, Washington.

It is the intention of your committee to print from

time to time, as they may be received, the reports of the progress of the investigation. It is further proposed to have a large plot drawn of the site of Assos, on which the progress of the work may be marked from month to month, for exhibition in the Museum of Fine Arts in Boston, for which permission has been kindly granted by the Trustees of the Museum. Whether the work at Assos can be satisfactorily completed in the course of the current year, or whether it will be necessary to carry it on in 1882, after an intermission during the winter of 1881-82, cannot as yet be determined.

While the preparations for the Assos expedition were making, your committee were enabled, through the liberality of Mr. Henry P. Kidder, to engage in another undertaking that gave promise of interesting results. In the spring of 1880 Mr. W. J. Stillman, during a brief visit to Crete, received assurances from the Governor of the island, Photiades Pasha, that should he desire to make explorations on any of the sites of ancient cities in the island, every assistance should be given him to do so. The certainty that the soil of Crete is rich in the remains of ancient Greek civilization, the friendly relations between Mr. Stillman and the Christian inhabitants of the island (established many years since during his residence among them as Consul of the United States), his familiarity with the history and geography of Crete, and the prospect of the favor of the authorities, combined to make it probable that such investigations as Mr. Stillman might be

enabled to undertake would not be fruitless. There seemed reason to hope that beside the increase of knowledge resulting from them, objects of archæological and artistic interest would be found which, by proper and open means, could be secured and brought home. It was Mr. Kidder's wish to enrich the Museum of Fine Arts in Boston with such objects, and it was agreed by your committee that should any such be obtained they should go to the Museum as a gift from him.

A firman was consequently applied for from the Turkish Government, through the Department of State, that should authorize the agent of the Institute to investigate the sites of Gnosso and Gortyna. The early association of Gnosso and its neighborhood with the myths and the worship of Zeus, its later connection with Apollo, its legendary fame as the royal city of Minos and his descendants,¹ its long hold of power, its comparatively late existence as a wealthy and populous city, and the extent of the traces of its ruins, all indicate this site as one of which the investigation could not fail to be rich in interest. Gortyna, hardly less ancient, famous also in legend, the chief site of the myth of Europa, the rival in power of Gnosso, and with

¹ Τοῖσι δ' ἐνὶ Κνωσσῶς μεγάλη πόλις· ἔνθα τε Μίνως
'Εννέωρος βασίλευε Διὸς μεγάλου ἄριστος.

OD., xix. 178.

It will be remembered that the scene of Plato's "Laws" is laid here, and that the conversation, which is held on a walk from Gnosso to the cave and temple of Zeus, opens with a reference to these verses from the *Odyssey*. As late as the date of this dialogue Gnosso had precedence over the other cities of Crete. See Book vi. 752.

even longer duration of existence, also offers much to the explorer.

Mr. Stillman having been commissioned to proceed to Crete, arrived there on the 2d of January of this year. Although at a first interview the Pasha confirmed the promise given in the previous June, it soon became evident that, instead of assisting, he was inclined to place obstacles in the way of Mr. Stillman's work. The island was in a restless state; and in case that war, which appeared imminent, should break out between Greece and Turkey, an insurrection in Crete seemed inevitable. Mr. Stillman, owing to his relations with the leaders of the insurrection in 1866-68, was looked upon with suspicion by the authorities, and his arrival in the island, just at this moment of disquiet, gave color to the notion that his real object was political rather than archæological. The issue of the firman was not formally refused, but Mr. Longstreet, in his endeavors to obtain it, found himself met with indefinite postponements and courteous excuses. After vain endeavors to overcome the opposition to his proceedings, Mr. Stillman was finally compelled to resign the commission of the Institute, and left Crete about the middle of March, accompanied by Mr. J. H. Haynes, of Rowe, Massachusetts, who had been sent out as his volunteer assistant.

Although the expedition thus failed in its main object, Mr. Stillman's stay in Crete enabled him to make some preliminary observations not without ar-

chæological interest. The account of these observations is given in his letters, of which extracts appear as an appendix to the present report. They embody information that will be useful to future explorers, and indicate how rich and varied a harvest of discovery lies waiting to be gathered in. Your committee do not give up the hope of work in this field. The request for the firman has not been withdrawn, and it will be pressed by the Department of State, with assurance that the Turkish government can make no serious objection to granting it, now that Mr. Stillman is no longer the agent of the Institute. Your committee cannot but regret that they are not to have the benefit of the services of an agent of such remarkable qualifications for the special task of exploration in Crete as Mr. Stillman.

In the report which they presented last year, your committee made the suggestion that the establishment of an American School of Classical Literature, Art, and Antiquities at Athens was an object well worthy of your attention. They desire to repeat this suggestion, in the belief that while such a school would prove serviceable to the progress of classical studies in America, it is an almost indispensable supplement to the Archæological Institute itself, as the means by which a succession of competent scholars may be provided for carrying out, in the most efficient manner, an important portion of the work which it was established to perform. France and Germany have long

possessed such institutions, and the value of the work which has been accomplished by them is well known to all scholars. At the close of an interesting essay upon Delos, in the first number of the "Journal of Hellenic Studies," based in great part upon the labors of the French School, Professor Jebb warmly commends the foundation of a similar English establishment at Athens. "All that is needed in order to secure it," he says, "is the co-operation of those sympathies to which our Society"—that for the Promotion of Hellenic Studies—"appeals. The value of such a permanent station has frequently been illustrated by fruitful enterprises." The same motives which might lead to action in England to this end exist here, and are even more urgent; and the same sympathies to which the Society for the Promotion of Hellenic Studies might appeal in England may be appealed to here by our Institute.

It is not needful to set forth the general considerations of the importance of classical studies, and the value of the influence of Greek discipline and methods of thought and life to a community like our own. They are too patent and familiar. Your committee urge this matter in the special interest of the Institute.

The maintenance and direction of such a school as is proposed might well be undertaken by our chief universities. A common effort on their part could not fail of success. The general features of the scheme are simple. It requires the securing of a proper local

establishment at Athens, and an agreement between the universities to support alternately, for such periods as should be determined upon, a professor at the head of the school, who should have charge of its conduct during his term of residence. The details of the project would require discussion, but would hardly present serious difficulties.

Your committee recommend the appointment of a special committee to take this subject into full consideration, to correspond with the institutions that would be likely to derive benefit from its establishment and might wish to share in its direction, and to take such other steps in the matter as may seem desirable.

The number of members of the Institute has not increased during the past year as largely as could be wished. The interest of the work in which the Institute is now actively engaged will, it may be hoped, lead the public to respond more generally to its claim for support. The regular income now derived from the annual fees of members is not enough to support such investigations as have been undertaken. It cannot be doubted that there is a sufficient number of persons in the country who take an interest in the study of American or classical antiquity to provide the Institute with the means required for the successful prosecution of its work, could they be reached. The special committee on the increase of membership, appointed last year, should be reappointed with fresh instructions.

It appears from the Treasurer's books that on the first of May there was a balance in his hands of \$2,717.11. Since that date this sum has been slightly increased by the payment of fees that were in arrears, so that the actual cash balance may be estimated at about \$2,800. From this sum must be deducted the cost of printing Mr. Bandelier's Paper on Pecos, and the present report of the Executive Committee, as well as some minor expenses, altogether amounting to about \$700. The sum in hand, then, for current expenses in 1881-82 is about \$2,100, while the income from fees of active members now on the list will not be far from \$1,500.

The estimated expense, including salaries, of the Assos expedition, for the six months, from the first of May to the first of November, upon the most economical basis, is \$2,500; and your committee could not hope to keep the expense within this exceedingly moderate sum were they not heartily seconded by the efforts of every member of the expedition, and by the zeal which leads them to submit to restricted and hard modes of life for the sake of success in the work on which they have entered with so generous a spirit.

The salary of Mr. Bandelier, from May till November, and the expenses connected with his work, will be hardly less than \$850. To him also your committee are indebted, not only for his willingness to accept a salary so small in amount, but also for his unremit-

ting efforts to save the Institute from all needless expense.

The balance that remains for the printing of papers and for expenses that cannot be foreseen, is but \$250, — certainly not more than will be required.

Unless, then, further means are obtained the treasury will be empty on the first of November. It appears to your committee that a sum of not less than \$3,000 is required in order to ensure the satisfactory continuance of the undertakings now in progress. With a larger sum much might advantageously be done that cannot now be attempted. They rely on the members of the Institute to provide the means required for their work. The most efficient mode of doing so is to secure the adhesion of new members. A list of a thousand active members would make the Institute independent, and relieve it from the need of frequent special appeals for funds.

To meet the present contingency the Executive Committee recommend the appointment of a Finance Committee, charged with the duty of obtaining the sum required to carry on work through the year 1881-82.

CHARLES ELIOT NORTON, *President.*
MARTIN BRIMMER, *Vice-President.*
FRANCIS PARKMAN.
WILLIAM W. GOODWIN.
HENRY W. HAYNES.
ALEXANDER AGASSIZ.
WILLIAM R. WARE.
O. W. PEABODY, *Treasurer.*
E. H. GREENLEAF, *Secretary.*

Executive Committee.

APPENDIX.

EXTRACTS FROM LETTERS OF W. J. STILLMAN,
RESPECTING ANCIENT SITES IN CRETE.

I.

RUINS OF GNOSSOS, AND ON MOUNT JUKTAS.

CANDIA, Jan. 17, 1881.

OF the ruins of the city of Gnosso little is visible above the soil except some masses of Roman rubble work. At the southern extremity of the site some recently commenced excavations, interrupted by the Pasha, have laid bare some remains of ancient walls. They are, though what is left of them is only about six or seven feet in height, of very great interest, being constructed of huge blocks of hewn stone, gypsum, and sandstone, and the very small portion uncovered shows a narrow passage which gives me the impression of an entrance into the city. The structure is the earliest sample of the style commonly known as Hellenic that I have ever seen, and evidently belongs to the first stage of proper cut stone-work.

There are two or three other openings in the mass of *débris*, into rooms of some sort, one of them a room with walls of the same style, coated with a hard cement still retaining a smoothly finished surface, with two broad bands of a deep red color running round the apartment. The gentleman who made the excavation, and who accompanied me, informed me that he

found in this chamber several large jars, partially imbedded in the earth, resembling in size and general shape those in use now for the holding of oil, though different in ornamentation. In another room are three low seats of stone, and a doorway in which the hole for the bar is still perfectly preserved.

On the 16th inst. I went to Arkanes, from which village the ascent of Mount Juktas is made. The traditional and legendary evidence, preserved by Greek writers, agrees persistently in pointing out this mountain as the locality of the tomb of Zeus. In the investigations I have hitherto been able to make on sites traditionally connected with Zeus and his worship, I have found that the character of the remains marks them as belonging to the Pelasgic of the earlier forms. I expected, therefore, to find on the summit of Juktas some evidence of Pelasgic occupation. I was not disappointed, for I found the remains of a wall which had once encircled the summit of the mountain, of marked early Pelasgic work, similar to the wall of Tiryns, and to the greater part of the most ancient ruins in the Ionian isles, the stones being of large size, and well tied in some places by long blocks which crossed the entire breadth of the wall. This trace of wall enclosed a space of several acres, quite enough for an ancient town, and much too large for a hieron, as Spratt supposes it to have been. This space was strewn with fragments of antique pottery, and at the summit is a cavern now nearly filled up, but which seems to have had a considerable extent in its original condition.

That this cavern must have had a certain importance, is evident not only from the tradition clinging to it, but from its position in the centre of a considerable town and, so far as I know, that which seems entitled to be regarded as the oldest of all the fortified places in Crete. The mountain is put down in Spratt's chart as having an altitude of 2,700 feet ; and, being isolated and precipitous, it commands a large extent of country of the most fertile character, looking down on the plain of

Gnossos and all the flat country as far as the sea on the north. It possesses, therefore, all the characteristics of the most important sites of the early Pelasgic civilization, — a high and impregnable position for a walled town, so far isolated as to make it practicable to watch all approaches, a fertile, plain country round it, and an easy access to the sea. That this cavern, so situated as to be in the most defensible part of this fortified space, should have had great importance as royal residence or tomb, or both in succession, as the home and place of sepulchre of a dynasty — which there is good reason to conclude was the earliest to begin the work of civilization in Crete, — is a rational conclusion from all we know or can reasonably conjecture. That it should finish by becoming a tomb and shrine, is in accordance with what we know of cave-residence and cave-temple.

I am convinced that the excavation of this cavern on Mount Juktas would bring to light some valuable evidences of the condition of the early civilization of Crete, and the work is one which would certainly receive my attention were I allowed to follow up the investigations here.

II.

RUINS IN THE PROVINCE OF MIRABELLO, — OLUS, AXOS, OLONTION; REMAINS OF A LABYRINTH-LIKE CONSTRUCTION AT GNOSSOS.

CANDIA, Feb. 21, 1881.

I have in the meanwhile visited the province of Mirabello and examined the ruins there. The road lies along the coast, passing the sites of Matium, marked by numerous rock tombs; Khersonesus, where I could see no distinctly Hellenic remains, though in some places the ground was quite covered with frag-

ments of ancient pottery ; an Hellenic site near the village called Mália and which, hitherto unnamed, I conjecture to have been the port of Lyttos, as the best and most direct road from that ancient city runs down to the coast at this point.

At Neapoli, the capital of Mirabello, no remains of the early civilization of the island are visible, but it is unlikely that a valley so large, so fertile and so accessible to the sea should have been without its city in those days when Crete was teeming with inhabitants. On inquiry, I heard that about twenty-five years ago, a tablet of marble had been found here inscribed with a treaty between the cities of Lyttos and Dryillai against the city of Axos. The tablet had been carried away by Vely Pasha, but the bishop having copied it was able to recall the main features, though he had lost the copy. It contained, he said, the oath taken by the citizens of the two cities for the destruction of the third. Ruins were reported on one of the hills overlooking the valley, and on examining the various peaks I found on two adjoining heights evidences of an ancient city site. On one of them were terrace walls for the purpose of keeping the earth from being washed down the mountain side, evidently of early Hellenic work, though rude ; while on the highest point of the range are remains of a citadel, the earliest remaining portions of which are some Roman foundations on which are middle-age walls, some cisterns, etc. ; but nothing was anywhere to be found of Pelasgic work or of the better class of Hellenic.

As soon as the weather permitted I went to Olus, a Cretan city well known during the epoch of the Gnoasian domination. It is fully described by Spratt, whose description I found rather highly drawn so far as regards the preservation of the ruins. It is, however, a most interesting ruin from the marked character of its remains and the, so far as I know, unique characteristic of their absolute homogeneity, showing that at whatever epoch the city may have been destroyed or abandoned, it was never reconstructed by a subsequent

civilization. It is on a steep hill-side, embracing, as is usual in such sites, two adjoining peaks. The remains are mostly house walls, and terraces on which houses have apparently stood. There are also some well-constructed cisterns, of which a few are still capable of containing water, all being cut out of the rock and cemented inside to make them tight with the very hard cement so well known by all who have had occasion to examine remains of the pre-hellenic epoch. Their occurrence in such numbers here where no question of the early date of construction can be raised, affords conclusive evidence of the use of cement at a period anterior to its use in wall building. Some of the cisterns still preserve a stone beam across the opening, probably to support flat stones with which to cover them in. Spratt speaks of Cyclopean walls here, but I could discover no sign of Cyclopean or any form of Pelasgic work, the stones not being remarkable for size, and, moreover, being cut with considerable exactness and apparent facility, making the use of cutting tools evident.¹ In some places, indeed, large masses of rock have been cut down to serve as walls, and at the very apex of one of the two peaks is a platform cut on the rock with a rude sort of moulding along its front, or city side, as if for ornamenting the flight of steps by which it was approached. This platform is too small for any citadel or work of military importance, and was most likely occupied by a temple, which, from its position, was probably that of the tutelary deity of the city. As Pausanias mentions (ix. 40, 2) that Dædalus made a wooden statue of Britomartis for Olus, we have a comparative date given at once to the city and to the stage of technical attainment

¹ Spratt, as well as many other writers on antique remains, confounds continually all kinds of polygonal or rough work with Pelasgic or Cyclopean, but the latter term is properly limited to the earliest or unfaced style of Pelasgic work, which is invariably of *unhewn* stone, the facing, however exact, being always by hammering, and the smoothing, if any, by attrition. The masonry of Olus is sometimes polygonal and sometimes parallelopipedal; but the one, as the other, shows well cut surfaces here and there.

which it marks so well. There is an excellent wall leading down from the saddle between the two peaks towards the sea, clearly the substructure of a road carried along the steep slope of the hill. The walls of many of the houses are still standing, for a height of five or six feet, possibly still higher if we could get down to the foundation, but they are all encumbered with *debris*, matted together with wild olive and almond trees, and various shrubs mostly of a spinous nature, which make an attempt to clear away the area of even one of them a serious undertaking, and one which the restrictions imposed by suspicions of the local authorities regarding my movements made impracticable. The best preserved of these houses consisted of a single room of about sixteen by twenty feet, with a door in the middle of each end, as shown by a stone door-post on each side, well cut so far as the wear of time and weather permitted me to judge.

Olus could never have been a city of great importance as compared with Gnosso, as the fertile territory which comes naturally under its control is too small to have been the source of great wealth, and it was too far from the sea to have had maritime importance.

The site of Axos is another of those which excite our astonishment at the difficulties attending civic security in those early times, and the patience which must have been exercised in overcoming them. Axos is clearly visible from Olus, on a peak on the opposite side of the Mirabello valley, about five miles away, but on an apparently almost inaccessible crag. I found it, on climbing up to the site of the city, about 2,000 feet above the sea level, on every side so precipitous that no attack, other than by surprise, would appear possible, and on three sides absolutely sheer natural wall. Yet on the whole hill the only ruins were some cisterns of most decidedly mediæval construction, possibly repaired for use in the days when pirates were as great a danger to the peaceable inhabitants as in earlier days were civic rivalities. At any rate not a frag-

FIG. I
Ruins of building
connected with labyrinth

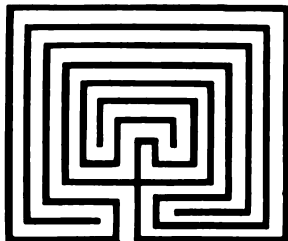
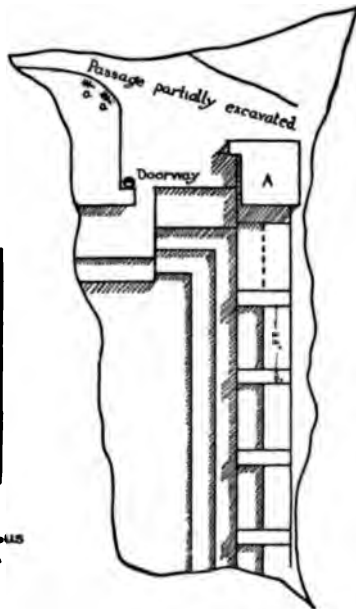


FIG. II.
Labyrinth from a coin of Gnosus
in the British Museum.

REFERENCES

a, a, characters inscribed
on the face of the wall
in the localities indicated.
b, b, excavated under ground.

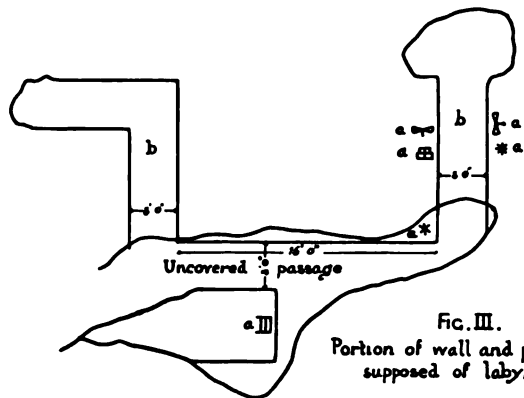


FIG. III.
Portion of wall and passages
supposed of labyrinth

ment of wall remains which, by the most strained judgment, could be regarded as antique.

From Axos a steep and even perilous road descends to Olontion, on the coast. There seem to me possibilities of profitable excavation in the ruins of this city, though the greater part is probably now under water.

At St. Nicolò, a few miles south of Olontion, a few evidences of ancient occupation occur, and the people excavating incidentally, have found vases and fragments of statues and marbles apparently of buildings of a better class than any thing we have found in the ruins of the cities already noticed. Spratt locates Camara here, and there seems no easy alternative, Ptolemy placing it east of Olus, and between Olus and Minoa, and this being the only port or apparent site between those of Olontion and Minoa.

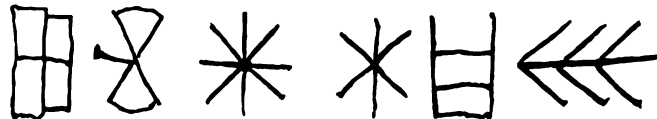
The break in the unwontedly severe weather of the winter, which had permitted me to make the excursions to Olus, Axos, and Olontion, was of short duration, and torrential rains prevented my leaving Neapolis for several days, so that when a bright morning came I made my escape to Candia, having passed twelve days at the former village, on only two of which did we have weather which permitted me to make excursions.

The rain came on again before I had reached Candia and several days were passed before I was able to resume my examination of Gnosso, and to make a more careful investigation of the ancient walls noticed on my former visit. I found in several places characters incised upon them, showing that the surface exposed was intended as the original exterior of the wall. The characters inscribed are indicated in the annexed plan (Plate I. Fig. III.) opposite the points in the wall where they are found. The structure has evidently been ruined by fire at a very early period, as portions have been patched up in a rude and unsubstantial kind of construction, while over this are fragments of Roman work. The portion uncovered is close to an ancient wall, of which the foundations

are at one point visible. The masonry of this wall resembles that of the inner work in style of execution and in material, the latter being in both cases mainly gypsum in huge blocks, one in the inner work measuring on front eight by two and a half feet; but here and there similar blocks of sandstone appear. Both are found in the adjoining hills.

Sixty yards to the north another fragment of structure is uncovered. This is of identical material and workmanship, and on one part bears characters resembling the arrow, used topographically to indicate the course of the wind, current, or direction to a place. It is evidently part of the same structure, and appears to have been an adytum. It is furnished with stone seats (?) which are about six inches in height. A door jamb (A.) (Plate I. Fig. I.) preserves the slot into which the door-bar was pushed, and shows that the door opened into the adytum, but was bolted on the outside, and the arrows on the wall outside appear to indicate an entry by this passage. Between the two portions given in the plan the same kind of wall may be seen here and there protruding above the soil slightly, indicating a continuous work.

Looking at the character of the fragments so far uncovered, the extreme narrowness of the passages, only three feet, too little for a street or entry into a city, the indication of a labyrinthine plan shown in the walls still remaining, which are, as far as cleared out, about seven feet high, its position on the point of the promontory enclosed between two small rivers, and therefore the strongest part of the ancient site and probably the nucleus of the city, the extreme antiquity of the wall, which belongs to the earliest style of parallelopipedal masonry apparently, in development of the art, immediately after that we found at Olus, I am at a loss to attribute this work to any other period or any other use than that which would belong to the Daedalian Labyrinth. The characters inscribed, viz. :



whether they are taken as hieroglyphs, indications for the builders, or keys to the threading of the passages, evidently belong to a period prior to the use of letters or any complete system of numeral record.

The importance of the discovery, if its supposed character be maintained on further excavation, is patent.

The excavations which have disclosed this, in any case, interesting monument were undertaken by the proprietor of the land and Mr. Minos Calocherino, in a search for antiquities, but were stopped by the jealousy of the insular authorities. Having found it impossible thus far to obtain the firman of the Porte, or the redemption of his engagement by the Pasha, I am obliged to renounce the hope of concluding the investigation at present, although I had made the agreements necessary with the proprietor.



Archæological Institute of America.

THIRD ANNUAL REPORT
OF THE
EXECUTIVE COMMITTEE,
AND
FIRST ANNUAL REPORT OF THE COMMITTEE
ON THE
AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

1881-82.

PRESENTED AT THE ANNUAL MEETING OF THE
INSTITUTE.

BOSTON, MAY 20, 1882.



CAMBRIDGE:
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1882.

CONTENTS.

EXECUTIVE COMMITTEE	5
REGULATIONS	7
LIST OF LIFE MEMBERS	9
LIST OF ANNUAL MEMBERS	12
THIRD ANNUAL REPORT OF THE EXECUTIVE COMMITTEE . . .	19
FIRST ANNUAL REPORT OF THE COMMITTEE ON THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS	49

CONTENTS.

EXECUTIVE COMMITTEE	5
REGULATIONS	7
LIST OF LIFE MEMBERS	9
LIST OF ANNUAL MEMBERS	12
THIRD ANNUAL REPORT OF THE EXECUTIVE COMMITTEE . . .	19
FIRST ANNUAL REPORT OF THE COMMITTEE ON THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS	49

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Executive Committee, 1881-82.

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REGULATIONS

ADOPTED MAY 17, 1879.

1. The Archæological Institute of America is formed for the purpose of promoting and directing archæological investigation and research, — by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A.M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

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13

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17

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ARCHÆOLOGICAL INSTITUTE OF AMERICA.

THIRD ANNUAL REPORT OF THE EXECUTIVE COMMITTEE.

To the Members of the Archæological Institute of America :

IN the year that has passed since the Executive Committee had the honor to present their last Report, the work of the Institute has been prosecuted, both in America and in the Old World, with vigor and with gratifying success, to the full extent which the means provided by the annual assessments of its members and by special subscriptions allowed.

The two departments of archæology to which the Institute devotes itself differ entirely in scope and character. In the American department the main interest is scientific. When this continent was discovered, it offered the ethnologist and the sociologist an astonishingly rich field of study. The men of the western hemisphere were in stages of social and political advancement which those of the eastern had passed long before, and in good measure had forgotten. What in the one was matter of antiquarian research or uncertain conjecture was a present reality in the other, where the student of human development found himself some-

what in the position of a naturalist in a newly-found world of mammoths, megatheria, fish-lizards, and all the races of earth, air, and water, which he had known hitherto only as fossils. Unfortunately, there was nobody to read understandingly the marvellous book thus thrown open. Its pages are now blotted and torn, and the process of destruction goes on to-day more rapidly than ever before; yet enough is left to yield valuable lessons, and it is our function to gather and piece together these fragments of vanishing knowledge before it is too late.

The work is anything but one of barren antiquarianism. We are dealing, it is true, with savage or barbarous tribes and aggregations of tribes who have done nothing for the higher progress of mankind; but the questions involved are as broad and far-reaching as any in the whole field of inquiry concerning man. Is the aboriginal population of America older or younger than that of the other side of the earth? Is it truly aboriginal, or was it introduced from abroad? Is it of one race, or of more than one? Are its religions, modes of thought, usages, and languages self-generated, or sprung from foreign germs? How long has this hemisphere been peopled by men? And under these lie greater questions still, of the laws that govern the growth of civilization out of savagery, and of the origin and antiquity of mankind itself.

The vast work of American archæology and anthropology is only begun. The time is not ripe for safe

and sure deduction. Our present business is to gather facts while to do so is yet possible. Other nations, with more or less of success, are trying to do our work on our soil. It is time that Americans bestir themselves in earnest upon a field which it would be shame to abandon to the foreigner.

In this great department of study the sources of knowledge are many and various;—the visible and material relics of ancient communities, from mouldering shell-heaps, mixed with implements of stone and the bones of extinct animals, to the cyclopean walls and populous cemeteries of Peru, or the temples and grotesque sculptures of Yucatan;—the aboriginal languages, a wide and complex study, as treacherous to one who dabbles in it as it is full of solid promise to the scholar who has strength and patience to sound its depths;—aboriginal religions and superstitions, cautiously distinguished from foreign elements injected into them;—the abounding stores of aboriginal folk-lore; and finally, the social organization and ways of living and thinking that, in many existing tribes and remnants of tribes, preserve their primitive forms with surprising persistency, and throw floods of light on the true character of the great barbarous aggregations which the Spanish conquerors called the empires of Peru and Mexico. Add to these a mass of early documentary evidence, Spanish, French, and English.

Here is an immense field, to which the Institute

is as yet in a position to do little justice ; but it has already done more than could have been hoped from the slender means at its command. Mr. Bandelier, whose services it has had the good fortune to secure, has remarkable linguistic acquirements, great knowledge of early books and manuscripts relating to the Spanish conquest and settlement of America, excellent qualities as a traveller and explorer, and a zeal and industry beyond praise.

The results of his visit to Mexico, which was announced in our last Annual Report, undertaken in accordance with an agreement with Mr. A. Thorndike Rice, the director in America of the Lorillard Expedition to Mexico and Central America in charge of M. Désiré Charnay, have justified the outlay upon it, and the interruption occasioned by it of Mr. Bandelier's investigations in New Mexico.

Early in March, 1881, Mr. Bandelier left M. Charnay at Mexico, and proceeded directly to Cholula, which he made his headquarters for the next four months. He has prepared a long and valuable Report upon his studies there and in neighboring districts which is now in the press, and will, it is hoped, be soon in the hands of the members of the Institute. This begins with a historical sketch of the city of Cholula, and an account of the manners and customs, the habits and superstitions of the present native Indian inhabitants. He describes their marriage ceremonies and their music and musical instruments, and gives an account of their simple vil-

lage organization and mode of government, and some information concerning their language. But the most valuable portion of this introductory matter relates to the domestic architecture of the Indians, including that singular survival of ancient times, the "Sweat-house." This study sheds light upon the methods of construction in use before the conquest.

The Report then proceeds with an elaborate account of the deity for whose worship Cholula was especially celebrated, involving a discussion of the question, "Who or what was Quetzal-chohuatl?" Of all the Mexican deities this is the one which has provoked the most diverse speculations as to his form, his origin, and his functions. Cortes first speaks of him, and relates that he was informed by Montezuma that the Mexicans had been led to their country by a chief who afterwards returned to his former home. This story is subsequently expanded by the chroniclers, who say that the return of this leader was looked for by the Indians, and that, consequently, when the Spaniards appeared they were regarded as supernatural beings, no other than their ancient chieftain and his followers. The various and conflicting traditions bearing upon this story current among the Nahuatl tribes, and also the version known to the Quiches and the Mayas, are thoroughly investigated by the author, who then proceeds to describe the Christianizing process to which this myth was afterwards subjected, and by which a remarkable analogy to the story of Christ was

developed. Finally, the conclusion is reached that Quetzal-chohuatl was originally a historical personage, who after his apotheosis became the tutelar deity of the Nahuítls.

From this position Mr. Bandelier proceeds to a careful study of (1) *who this personage was*; (2) *whence he came*; and (3) *what he actually performed*; and the conclusion is reached that he was a Toltec, belonging to a stock of sedentary Indians, who settled in parts of Central Mexico at some remote period, about whom and whose language nothing is now definitely known. Mr. Bandelier then examines the question whether or not Quetzal-chohuatl was the actual founder of Cholula, having migrated thither from Tula, or whether the city was originally settled by another stock, the Olmecs, and was afterwards visited by him. Leaving this undecided, he shows that Quetzal-chohuatl introduced great improvements among the people of Cholula in husbandry and the domestic arts, and organized a higher type of government; but that his most important achievement was the introduction of a form of worship free from human sacrifices. Finally he disappeared, and was deified and worshipped under the character of the God of the Air, or Winds. This must have occurred prior to the invasion of the Nahuítl tribes, the various legends about whom are next examined. One of these tells that the Nahuítls found the country inhabited by giants, whom they exterminated, and by whom the so-called "pyramid of Cholula"

was constructed. This would imply that a more barbarous tribe had succeeded to one of higher culture, the Toltecs, and it may be inferred that there was a blending of the customs of both and that the worship of Quetzal-chohuatl, converted into a formal adoration of the atmospheric forces and aspects of nature, was established as the tribal religion.

When this settlement of the Nahuítls on the site of Cholula occurred it is impossible to determine, but it was the last important event in its history prior to the Spanish conquest. In the mean while they had been living in a state of constant feud with neighboring tribes, in which condition they were found by Cortes. But before that time a great change had taken place in the forms of worship of Quetzal-chohuatl, and the element of human sacrifice had been re-introduced, as it was found to prevail at the time of the Conquest. The manner in which the sacrifices were made is described at some length, with an account of the ritual and the worship, and also of the organization of the priesthood.

The author then gives what information he was able to obtain in regard to the various localities where human remains have been discovered in Cholula, and attempts to draw some general conclusions as to the modes of burial that prevailed there at different periods. He describes two small, comparatively ruined "mounds of worship," built of adobe, still existing in the city; after which he enters upon

his most important archæological work, a study of what has been known to the world since Humboldt's time as the great "pyramid of Cholula." To it Mr. Bandelier will not allow the designation of "pyramid" to be applied. It is only a huge mound some two hundred feet high, and which, including an estimate of the constructions originally surrounding and connected with it, covered an area of about sixty acres. The whole structure now presents the appearance of three distinct terraces, surrounding and supporting a conical hill, and very wide. As the mound is much overgrown by shrubbery, it greatly resembles a natural hill. The entire mass is composed of bricks of various size, made of adobe clay without any admixture of straw, and laid, also, in clay; but these materials have so hardened that it has suffered comparatively little from the effects of time and the destructive hand of man. It appears to be solid throughout, and if it is built upon a natural hill as a core, this must have been of very small size. Here and there throughout the whole structure horizontal ledges crop out, a few inches only in width and of a whitish color, composed of carbonate of lime, mixed with pebbles and bits of lava. On the different sides there are still to be found remains of stone stairways, built in parallel flights and conducting by zigzags to the summit. There is a well-paved road, of Spanish origin, by which one can easily mount to the top.

Before attempting the hazardous undertaking of re-

storing the original shape and extent of the structure, the author first examines the various accounts of it that have been given by the old Spanish chroniclers, and reaches the conclusion that the lapse of three centuries has made but slight changes in its appearance, their measurements agreeing with his, and making it about a mile and a half in perimeter. Of course the restoration cannot well be understood without the aid of the plates and diagrams with which it is accompanied in the Report.

Mr. Bandelier then approaches the perplexing questions as to (1) *The manner in which the mound was constructed*; (2) *The purpose for which it was intended*; and (3) *Who were its builders*. In the first place he disposes of the supposition that the materials of which it is constructed were brought from a distance, by showing that they are of precisely similar nature to those which make up the plain on which it stands. From the manner in which the adobe bricks are laid, and from their variation in size, he draws the inference that the structure was not all erected at one time, but that the mound is the accumulation of successive periods of labor. This theory will account for its enormous size, without necessitating the supposition that the people were at some time vastly more numerous than at present; and it implies that it was intended for some purpose of public utility rather than as a mark of respect for the memory of an individual, or to benefit private interests only. At the

time of the conquest no part of it was used except the summit, and even then it looked deserted, and overgrown with vegetation. On the top stood a small ancient temple, dedicated by the Nahuatl to the God of Rain. There was no distinct tradition among the natives as to the purpose for which it had been built. The Spanish chroniclers attempt to account for it by various fantastic legends, evidently founded upon the story of the Tower of Babel, and these still linger among the inhabitants at the present day, though there is also a tradition that it was intended as a fortification. If any light is to be obtained from the various appellations given to it by the natives, this would seem to point to the assumption that it was intended for a place of refuge or a fortress. That the summit was actually used as a place of worship is proved by the antiquities that have been discovered there. But the final result of Mr. Bandelier's investigations is that he regards the structure as made up of huge walls of adobe, forming immense communal buildings, in character resembling those at Pecos and other places in New Mexico, but in size approaching the great edifices of Uxmal or of Palenque, and all built around a vast court, in the centre of which stood an enormous "worship-mound." This reduces the great pyramid of Cholula to an artificially elevated, fortified pueblo. Such a conclusion is very naturally reached by an archæologist who avows himself the disciple of our late distinguished associate, Lewis H. Morgan.

Upon the question, *Who were the builders?* he inclines to the opinion that they were the Toltecs, whom he would identify with the Mayas, chiefly from linguistic arguments, for some of which he acknowledges his indebtedness to Dr. Valentini.

Tradition is so uniform in speaking of its destruction, that it would seem that the report must have some foundation, and, in view of the present condition of the mound, that it must relate to the ruin of the buildings on the terraces and the summit, which may have been the work of the Nahuítls. If that be the case, the inhabitants settled again in the plain below, where they erected a new place of worship for Quetzal-chohuatl, and left the deserted summit of the mound as the seat of a different form of worship,—that of the God of Rain.

Mr. Bandelier proceeds to give some account of the other artificial mounds, which are to be seen in at least seven different places in the neighborhood of the city, and finds that they all fall under two classes: mounds built on the level ground, with no projecting platforms, and terraced mounds resembling the great hill of Cholula. He also found in the vicinity as many as eighteen different spots, where no traces of buildings and no mounds are to be seen, but which, by the presence of pottery and obsidian, indicate the sites of early Indian settlements; the majority of these, however, are only of small extent. In more distant portions of the territory of Cholula, upon the slopes of the volcanoes, are numerous traces of ancient occupation,

concerning which there is no tradition. From some of these spots small statues made of lava are exhumed, of a type quite different from any found in any other locality, and which seem to be the work of a people much less proficient in the art of carving stone than the Nahuítls.

To sum up the archæological results of Mr. Bandelier's studies at Cholula, he finds that tradition reports that the territory has been occupied by at least three different stocks of people, and that the modes of burial indicate as many distinct customs. The architecture also shows two different types of construction, — that of the Nahuítls, which prevailed at the time of the conquest, and an earlier system, that of the "mound villages," of which the great hill of Cholula is the most remarkable example, but instances of which are also to be found in many other localities. Finally, the question arises, whether the existence of a still older people may not be inferred from the instances of human interments that have been found beneath the platforms that surround the great mound, and from the circumstance that the adobe bricks of which it is built are found to contain pieces of pottery and of obsidian.

To confirm his views in regard to the ancient system of house-building at Cholula, Mr. Bandelier found it advisable to examine the aboriginal remains existing in other regions. Many considerations induced him to visit the remarkable ruins of Mitla, which he did early in June of last year. Before describing

them, he gives an interesting account of his journey thither, which was mostly made on horseback, and occupied a week. He describes with much particularity the places through which he passed *en route*, especially Oaxaca, and enters into a brief consideration of the antiquities now to be found there. The first sight of the strange spectacle that Mitla presents was exceedingly impressive. Standing in the midst of a gloomy solitude, the ruins, with their strange architecture and their wonderful decoration, purely geometrical in its character, seem indeed to be the work of a people of some unknown race. Accurate plans and measurements of the most important buildings were secured. These structures comprise, besides two artificial hills, thirty-nine distinct edifices. Two or three of them are constructed of adobe, plastered, and painted red; the others are built of stone. Of these latter the greater part stand upon the ground, but a few are built upon elevated terraces. There is, however, no material difference in the massiveness of their construction. Each wall, whether external or partition, is made up of an inner core, with an outer facing which serves both as a decoration and a protection. The inner portion is built, precisely like the walls of the pueblos of New Mexico, of broken stones laid in tolerably regular courses in clay. This work is more neatly executed than that at Old Pecos, but it is not equal to that of some of the other similar structures in New Mexico. The facing is constructed of blocks of stone ham-

mered and smoothed, having their inner ends imbedded in the clay of the wall. No mortar or binding substance other than the clay is employed in the construction of the walls. The ornamental façades of the buildings are a mosaic-work, made of small, smoothed stone blocks, set in rectangular frameworks of stone, and sloping slightly inwards from top to bottom. The blocks are generally of a wedge shape, and are driven into the clay of the inner walls in such a way as to cover them with a geometrical ornamentation, which, though not absolutely symmetrical, presents a striking and agreeable appearance. Each section of wall displays a different pattern; but this difference is so slight that the general effect is harmonious. The whole work was built by rule of thumb, unaided by the simplest mechanical appliances, as is proved by the fact that when the plummet or the square is applied to the surfaces, no right angles or exact perpendiculars can be found. The main entrances to the buildings open upon an inner court, and have lintels, many of which are carved upon their outer faces in various geometrical patterns. Instead of the mosaic pattern of stone work, some of the panels of wall are filled with a white stucco, on which various designs are painted in red, resembling those that are found carved on the Mexican "sacrificial stones," and also human figures arranged in rows with the faces down and wearing headdresses like those delineated at Chichen-Itza. Some of the houses stand upon ter-

ances, which are made of rubble-work and earth heaped together and faced in the same way with smoothed stone-work, and arranged around a gallery in the form of a cross. The superstructures raised on these terraces were reached by flights of steps, of which some vestiges remain. From the manner in which they are constructed their interiors must have been very dark, as light could only have been admitted from one side, and the apertures for this purpose were neither lofty nor broad. Mr. Bandelier has characterized the so-called "palaces" of Mitla, built as they were and ornamented without any knowledge of mechanical contrivances, dark and imperfectly ventilated, as only a "barbaric effort of a barbarous people."

It has always been a subject of dispute what was the object for which such peculiar buildings were constructed. Mr. Bandelier's conclusion, drawn from the shape and size of the single apartments, is that they were not intended for every-day abodes, but only as shelters at night and in bad weather, and retreats for the women and children during a hostile attack. He regards them as merely communal structures, so arranged that different apartments were occupied by the two sexes separately, and thinks that they differed from the similar constructions of other Indian tribes only in so far as the exigencies of a different climate or of varying resources demanded.

The structures at Mitla owe their celebrity to their supposed unique character and appearance; but they

Papers of the Institute, or in the Annual Reports of the Peabody Museum at Cambridge. The greater part of such collections as Mr. Aymé may make are, like the other collections of American antiquities made by the agents of the Institute, to be deposited in the Peabody Museum.

It is of the greatest importance that whatever is done in Yucatan should be done now; for if the present generation allow another quarter of a century to pass without preserving the records of these ruins it will be impossible then to rescue the little which is still accessible. One who has not visited Yucatan can hardly form an idea of the ravages caused by men, climate, and vegetation.

During the forty years which have elapsed since Stephens visited these ruins, the destruction has been great. Buildings which he described in 1840 as still standing in a fine state of preservation are now nothing but heaps of stone. Mr. Charnay, on visiting Yucatan after an absence of twenty years, often found it difficult to recognize his whereabouts, from the great changes which had taken place during that time.

It is believed that from five to six thousand dollars will suffice to meet the expenses of this important exploration for the next three years, and your Committee trust that sufficient interest will be taken in the work, by the members of the Institute and other persons, to supply this sum, small in comparison with the results which may be confidently looked for from its expenditure.

Turning now to what has been accomplished in the Old World by the Institute during the past year, your Committee are gratified to report that the Expedition to Assos in charge of the two able and accomplished agents of the Institute, Mr. Clarke and Mr. Bacon, has already accomplished a work of great archæological interest and importance, by which the knowledge of Greek art and antiquity is substantially increased, — a work alike honorable to the Institute and creditable in the highest degree to the energy, good judgment, and ability of the gentlemen who have been immediately engaged in it.

For the full details of this work, of the difficulties which have attended it, of the manner in which it has been conducted, and of the special results obtained by it, your Committee beg leave to refer to the full Report of Mr. Clarke, which they present to you in print as the first of the Classical Series of the Papers of the Institute.

The main achievement of the year, — the complete recovery and exact delineation of the plan, elevation, and adornment of the ancient and famous temple of Assos, which has so long offered problems of special interest to the students of Greek architecture and sculpture, — is one in which the Institute may take justifiable pride. Among the many remarkable archæological discoveries of the present generation it takes a prominent rank, and though it does not possess the brilliancy or the extent of some of these discoveries, and

does not touch the fancy or excite the curiosity like the finding of hidden treasures of perplexing age and origin, it claims a just distinction in the light it throws upon the character of Greek art at a period of special interest in its history.

It is more than mere good fortune that the first American public expedition for archæological research in the Old World has succeeded in recovering knowledge of a unique structure of the Doric style, — that highest expression of the architectural genius of the Greeks, — and that to America should be due the credit of the restoration of a monument, the character of which gives to it exceptional importance in the history of ancient art.

The architecture of the temple is hardly more interesting than its sculpture, and the reliefs from epistyle and frieze which our Expedition has discovered, besides adding greatly to knowledge of the series and character of these sculptures, afford evidence, perhaps more striking and positive than any hitherto obtained, of the comparatively late period to which Oriental modes of representation and methods of technical execution continued to exercise a strong influence upon Greek art.

The investigation of the other structures of the city, although still imperfect, and requiring to be completed by the labors of the present year, has already gone far enough to justify Colonel Leake's belief that the remains at Assos present the most perfect idea of a Greek

city that is anywhere to be obtained. The imagination is impressed by the gradual bringing to light in their exact forms and relations of the various edifices of a city that flourished for many centuries, inhabited by a people who shared in the highest civilization of antiquity, long since deserted and given over to forgetfulness. But "the iniquity of oblivion" has been to this town the chief favor of its fate, for while "time, which antiquates antiquities, and has an art to make dust of all things," has done its work here as elsewhere, it has been less seconded by the destructive energies of man than in many a more famous locality. Men have indeed wrought wasteful ruin here, but they have left enough of wall and foundation subsisting to enable the investigator to reconstruct the image of the ancient city, and to afford a sure pathway for the student of its streets and monuments. The columned stoa where its people met for intercourse, the gymnasium where they came for exercise, the basilica which they frequented for the transaction of affairs of justice or of trade, the theatre where they witnessed the performance of Athenian plays, the walls from which they defended their city, the tombs in which they buried their dead, and among which they set benches of repose from which to contemplate the beauty of the exquisite view over land and sea that lay stretched before them, — all still exist in such remains that the aspect of Assos in its ancient state may be regained from these fragmentary relics of the past.

One of the most interesting discoveries of the last year is that of the skilfully constructed stone piers of a bridge that crossed the stream, the "fair-flowing Satnioeis" of Homer, which ran outside the city. So far as is known, it is a unique specimen of a Greek bridge.

The Report of the work of the last year opens many questions which will occupy the attention of students of classical antiquity. The evidence it presents in regard to the structural character of the temple, and to the nature of the sculptures with which it was adorned, will serve to correct many prevalent but erroneous views, for the most part based upon Texier's misleading description and delineations.

It seems probable that this evidence will suffice to determine approximately the date of the erection of the temple, which has long been matter of dispute. If Mr. Clarke's opinion be correct, that it is to be assigned to the period immediately following the final repulse of the Persian invasion of Greece, — which its marked resemblance in dimensions and other important features to the Theseion, erected at this time, seems to confirm, — the archaic character of its plan and of its sculptures will illustrate vividly the wide difference between the contemporaneous artistic culture and development of Athens and of a flourishing provincial Greek city. Such an illustration throws a light clearer than any literary record affords upon the difficulties attending the maintenance of the Delian confederacy, and

upon the ultimate failure of Athens to maintain the union of the states and cities under her lead. Many other matters of interest are suggested by the Report, but it has been in the hands of your Committee for too short a time, — having reached them only at the beginning of April, — to admit as yet of a full consideration of them.

Your Committee desire to draw attention to the admirable manner in which Mr. Clarke's able and learned Report has been illustrated by the exact and beautiful drawings of Mr. Bacon and Mr. Walker, as well as by those from his own hand. The engravings, although essentially trustworthy reproductions, do but scant justice to the refinement of the original designs.

The number of inscriptions hitherto discovered at Assos is small, but several of those which have been found are of unusual character, and make an addition of worth to the body of epigraphic remains. The bronze plate bearing the inscription set up in honor of Caligula's accession as emperor, is a specimen of a class of inscriptions of extreme rarity. It is proposed to illustrate it in a special publication.

The papers in the Appendix, by Mr. Diller, upon the geology of Assos and of the Troad, make a real and welcome addition to knowledge of this interesting region. It is hoped that Mr. Diller will continue his work during the present year, and that its result will be the gain of a complete acquaintance with the geological history and characteristics of a portion of

the earth's surface which has hitherto been very imperfectly known.

Mr. Bacon returned to Assos on the 1st of March last, to renew the labors which had been suspended during the winter, owing to the inclemency of the weather. Mr. Clarke, accompanied by a young Danish architect of distinction, Mr. Robert Koldewey, arrived at the site on the 1st of April, having been detained at Munich in the completion of his Report.

Excavations were begun, on March 8, at the Street of Tombs, and were speedily rewarded by interesting discoveries. Numerous unopened sarcophagi have been found, containing crumbling fragments of human bones and vessels of pottery and glass of various form and dimensions. On cutting a trench westward, near the road, many black and red earthen jars, resting upon bed rock, were uncovered. These jars also contained fragments of bones, and varied in size from twenty-five centimetres to sixty centimetres high. Inside of the larger vessels were generally from two to six smaller ones of different shapes. "From the indications now apparent," writes Mr. Bacon, "I think we shall have as much pottery as we care to dig out."

Under date of April 8, Mr. Clarke writes: "In working on the Acropolis we have found another considerable fragment of the epistyle reliefs, namely, all the rest of the sphinx from the rear of the temple, — neck, body, and hind-legs, — in a rather better state of preservation than the head. It is valuable as completing the

block in the Louvre, and as showing the entire arrangement of the heraldic animals. We feel sanguine of further interesting discoveries.”

Three sets of casts have been taken from the sculptures found last year, one of which it is proposed to present to Dr. Humann for the Berlin Museum, in acknowledgment of his generous aid to our Expedition, referred to by Mr. Clarke in his Report; while another will be given to the Louvre to complete its series of sculptures from Assos.

Up to April 30 of the current year, the total cost of the Assos Expedition, including the salaries of Mr. Clarke and Mr. Bacon, had been \$7,265.50. The estimate for the remainder of the year is:

Salaries, eight months	\$1,600.00
Support of the members of the Expedition	900.00
Labor on excavations and other expenses at the site	2,500.00
	<hr/>
	\$5,000.00

The cost of the Expedition thus far has been mainly met by contributions solicited for the express purpose of carrying it on, and your Committee would offer the thanks of the Institute to all those persons who have thus supported its work.

The Art Club and the Philological Society of Harvard College, with a generous interest in the work of the Institute on Classic soil, have undertaken to share the cost of printing the Assos Report. To the members of these two Societies the thanks of the Institute are especially due for this essential aid.

Much work remains to be done at Assos to finish the task so successfully begun. The accumulation of earth and débris upon the summit of the Acropolis must be completely removed, in order to make sure that all the sculptures and other objects of interest buried in it are recovered; the Stoa and the buildings in its immediate neighborhood, the complex of halls provisionally named the gymnasium, the theatre, and other public edifices within the walls must be unearthed; the unrivalled walls of defence require thorough study, the cemetery needs to be extensively excavated. There is certainty of interesting discoveries and important archæological results from these investigations. Your Committee believe that all that is of essential importance can be accomplished during the present season, provided that the means for doing it be placed in their hands. The sum requisite to complete the work, in addition to the means they now have at command, is not less than three thousand five hundred dollars. This moderate amount would not suffice but for the extreme economy practised, at a cost of great self-denial, by the members of the Expedition, and but for the good judgment of which Mr. Clarke and Mr. Bacon have given proof in the management and direction of the works. Your Committee cannot believe that there will be any considerable difficulty in obtaining this amount for the completion of a work of such interest, and so creditable to the country. They urgently request contributions for this object. Unless this sum be speedily obtained, the work must be stopped half done.

The number of members of the Institute from whom annual assessments are received is less than two hundred. It is upon the increase in the number of members that the continued efficiency of the Institute must depend. Desirous as the Executive Committee is to continue active work, and rich as is the promise of work that might be entered upon in new fields if means were provided for its accomplishment, the members of the Committee cannot undertake the labor of obtaining the means in addition to their other duties. Upon them individually, assisted by the members of the Finance Committee, has the task of raising money hitherto fallen. They are unwilling to retain this responsibility. They appeal to the members of the Institute to relieve them from it by making more strenuous efforts to increase the number of members, as well as to obtain voluntary contributions for objects worthy of the personal effort of every lover of the past and of every friend of learning.

At the Annual Meeting of last year a Committee was appointed to devise a plan for the establishment at Athens of an American School of Classical Studies, and to take steps, if it should appear well to do so, for carrying it into execution. The Executive Committee have the great satisfaction of presenting to you the first Report of the Committee on the School at Athens, from which it appears that the establishment of the School is already secured under the most pro-

pitious auspices. Such a result is matter of congratulation to the Institute, and of gratification to all scholars and lovers of Classical learning throughout the country. It has been accomplished by means of the hearty co-operation of most of our leading Universities and Colleges, and their union in furtherance of a common object is one of the points in the scheme which appears to be of best promise for the School, while in itself it is a fact of no slight import in the mutual relations of the Institutions that have in charge the interests of the highest education. The first Annual Report of the Committee on the School is herewith presented to you.

CHARLES ELIOT NORTON, *President.*

MARTIN BRIMMER, *Vice-President.*

FRANCIS PARKMAN.

WILLIAM W. GOODWIN.

HENRY W. HAYNES.

ALEXANDER AGASSIZ.

WILLIAM R. WARE.

HENRY L. HIGGINSON, *Treasurer.*

EDWARD H. GREENLEAF, *Secretary.*

EXECUTIVE COMMITTEE.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FIRST ANNUAL REPORT

OF THE

COMMITTEE ON THE AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS.

FIRST ANNUAL REPORT

OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

To the Executive Committee of the Archæological Institute :

GENTLEMEN, — As Chairman of the Committee appointed at the Annual Meeting of the Institute on May 21, 1881, to devise a plan for the creation at Athens of an American School of Classical Literature, Art, and Antiquities, and to carry the plan into immediate execution should it appear well to do so, I have the honor to submit the following Report: —

The Committee held its first meeting at Cambridge on June 22, 1881. At this meeting two plans for the establishment of the School were discussed. The one proposed to found it upon the basis of an endowment of at least \$100,000, to be collected by subscription and invested before the School should be opened; the other to open it at once with a temporary and less elaborate organization, under the auspices of some of the leading American Colleges, the work of accumulating a permanent fund continuing in the

mean time. The Committee adjourned without coming to a decision.

In October Mr. Frederic J. de Peyster, of New York, was added to the Committee. At a meeting held at Boston on November 5, the Chairman reported that gentlemen in authority in several Universities had been consulted, and had signified the probable hearty co-operation of the institutions with which they were connected in the scheme of founding the School under the auspices of American Colleges. The Committee thereupon adopted the second of the two plans proposed in June, and appointed a Sub-Committee to prepare for publication a brief statement of the general project of the Archæological Institute for the creation of a School of Classical Studies at Athens and of the plan proposed to be put into effect, and to address a letter to the Presidents of the Colleges which were to be invited to co-operate in the foundation of the School. These documents follow.

PROJECT FOR THE ESTABLISHMENT OF AN AMERICAN
SCHOOL OF CLASSICAL STUDIES AT ATHENS.

THE Archæological Institute of America has had for some time under discussion a project for the creation at Athens of an American School of Classical Literature, Art, and Antiquities, upon the plan of the well-known French and German Schools already established there. At the last Annual Meeting of the Institute, a Committee was appointed to devise a method for carrying this project into execution.

The permanent establishment of the School as an independent institution, subject to the control of a Managing Com-

mittee chosen by the Archæological Institute, would require a fund of at least \$100,000, to provide for the salary of the Director, the rent and care of a house, the purchase of books, and the various expenses which might be incurred in carrying on the work of the School.

The building of the School should contain apartments for the Director and his family, and suitable rooms for the meetings, collections, and library. Eventually, when the resources of the School warranted it, there might be in the building rooms for its students.

The School would be in charge of a Director of recognized ability and attainments, appointed for such time as the Managing Committee might deem proper. It would be the duty of the Director to superintend the work of the members, and to send yearly to the Managing Committee a full Report of the work accomplished by the School.

Every member would prepare, during each year of his membership, a thesis embodying original research upon some subject within the province of the School. These theses, if approved by the Director, would be sent by him to the Managing Committee.

Upon the completion of his course of three years, each member would receive from the Director and the Committee a certificate setting forth those branches of study to which he had devoted himself.

It is hoped that the Archæological Institute may be able to undertake the publication of a regular illustrated periodical, similar in character to the *Bulletin* of the French School at Athens, to contain the reports and theses of the School at Athens and other contributions of merit, as well as archæological news.

Such, in brief, is the project of the Committee of the Institute, for the permanent foundation of the American School at Athens.

But, that time may not be lost while the permanent fund is accumulating, it has been thought desirable, if possible, to open the School at once, with a temporary and less elaborate organization, under the auspices of some of our leading Colleges. The cordial support of Harvard, Yale, Johns Hopkins, Cornell, and Brown Universities is already assured to the plan; and every effort will be made to have the American School at work in Greece next autumn.

Dec. 20, 1881.

JOHN WILLIAMS WHITE (*Chairman*).
 E. W. GURNEY.
 ALBERT HARKNESS.
 THOMAS W. LUDLOW.
 FRANCIS W. PALFREY.
 FREDERIC J. DE PEYSTER.

CAMBRIDGE, Dec. 20, 1881.

To the President of _____

SIR, — The undersigned, a Committee of the Archæological Institute of America on the establishment of an American School of Classical Studies at Athens, desire to secure the interest and support of _____ in the establishment and maintenance of the proposed School.

There is no need to set forth at length the benefit to Classical studies in this country which may be derived from an American School of a similar character to the French and German Schools at Athens. The accompanying paper contains a statement of the design of the School.

In order to carry this project into execution, united action on the part of our leading Universities and Colleges is required, and the Committee is desirous of learning from you whether the _____ of which you are the head, will take part in the work.

So long as the School has no permanent fund for its sup-

port, it is proposed that the Director of the School be chosen for a term of one or two years from among the Professors or Teachers of Greek in the various Universities and Colleges uniting in the scheme, and that a salary as Instructor be continued to him by the University or College to whose Faculty he may belong, during his term of residence in Athens.

It is desirable that each of the Institutions sharing in the support of the School should undertake to offer to its students one or more fellowships for a residence of not less than two years at the School, to be obtained as the reward for distinguished proficiency in Classical studies during the undergraduate course.

In the lack of a permanent fund, a certain sum, not more than \$2,500 annually, must be pledged for the necessary expenses in Athens, for rent, wages, etc. Of this sum \$250 a year has been pledged already by gentlemen connected with Harvard College, for a term of ten years, or for a shorter term provided that a permanent fund be obtained meanwhile for the support of the School; and it is hoped that a similar subscription may be obtained from the *alumni* or friends of each College or University that shall join in carrying the project into execution.

We have received assurance of the cordial co-operation in the scheme of Harvard, Yale, Johns Hopkins, Cornell, and Brown Universities.

May we have the satisfaction of receiving also that of ————, on the general terms of this circular? And may we request the honor of an early reply to this communication?

JOHN WILLIAMS WHITE (*Chairman*).

E. W. GURNEY.

ALBERT HARKNESS.

THOMAS W. LUDLOW.

FRANCIS W. PALFREY.

FREDERIC J. DE PEYSTER.

These documents were sent to the Presidents of Harvard, Yale, Brown, Amherst, Cornell, Johns Hopkins, College of the City of New York, Michigan University, Columbia, University of Virginia, College of New Jersey, and, subsequently, to those of Union, Trinity, Wesleyan, and Dartmouth.

The answers received were in the main so favorable that the Committee determined to open the School in the autumn of 1882, and in February, 1882, invited W. W. Goodwin, Eliot Professor of Greek Literature at Harvard University, to become its Director for the first year. In a letter received the middle of March, Professor Goodwin accepted the Directorship. The Corporation of Harvard University had previously signified that in case of his acceptance they would allow him during the year of his absence a salary of \$3,000. In March the following gentlemen accepted membership on the Committee: Professor Henry Drisler, of Columbia College; Professor Basil L. Gildersleeve, of Johns Hopkins University; Professor Lewis R. Packard, of Yale College; Professor William M. Sloane, of the College of New Jersey. It was subsequently voted that the President of the Archæological Institute and the Director of the School should be *ex-officio* members of the Committee, which therefore now numbers twelve.

A meeting was held in New York on April 6, at which Mr. Thomas W. Ludlow was appointed the Secretary of the Committee, and Mr. Frederic J. de

Peyster the Treasurer of its funds. The Chairman reported favorable answers to the circular and letter sent out on Dec. 20, 1881, from Harvard, Yale, Brown, Amherst, Johns Hopkins, College of the City of New York, Columbia, College of New Jersey, and Wesleyan. The annual subscriptions of these Colleges amount to \$2,250. Most of them are made for ten years; the remainder for a shorter time, but with the confident expectation that they will be continued during the entire period. Trinity, much to the regret of the Committee, was unable to co-operate. Five Colleges have not yet made final answer.

The Treasurer was authorized to call in the subscription of each College on the 1st of June of each year, to meet the expenses of the School during the following year. Semi-annual meetings of the Committee were appointed to be held in New York on the third Friday of November, in Boston on the third Friday of May. The further deliberations of the Committee are embodied in a circular, to be published immediately, which a Sub-Committee was requested to prepare for the information of the public.

In conclusion, the Committee hope to obtain for the School through the Institute the good offices of the United States Government, in order that the Director may have every facility afforded him in carrying on his work, and would be glad to receive from members of the Institute the suggestion of desirable undertakings in

archæological research to be attempted by members of the School. The Committee do not propose to make an immediate appeal for a permanent endowment. The present plan closely unites Colleges whose interests are in some respects diverse in the furtherance of an object, the promotion of which will be creditable to American scholarship. Such union must in itself be fraught with good results. When the School, under the management of the Colleges, shall have demonstrated its usefulness, the Committee confidently believe that means for its establishment upon a permanent basis will not be wanting.

JOHN WILLIAMS WHITE,
Chairman.

Thomas Hayes

Archaeological Institute of America.

FOURTH ANNUAL REPORT

OF THE

EXECUTIVE COMMITTEE,

AND

SECOND ANNUAL REPORT OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

1882-83.

PRESENTED AT THE ANNUAL MEETING OF THE
INSTITUTE.

BOSTON, MAY 19, 1883.



CAMBRIDGE :
JOHN WILSON AND SON.
University Press.
1883.



Archæological Institute of America.

FOURTH ANNUAL REPORT

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EXECUTIVE COMMITTEE,

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CONTENTS.

EXECUTIVE COMMITTEE	5
REGULATIONS	7
LIST OF FOREIGN HONORARY MEMBERS.	9
LIST OF LIFE MEMBERS	9
LIST OF ANNUAL MEMBERS	12
FOURTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE . .	19
APPENDIX I. ADDRESS ISSUED IN NEW YORK	37
APPENDIX II. EXTRACT FROM A TOUR IN THE TROAD . . .	39
SECOND ANNUAL REPORT OF THE COMMITTEE ON THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS	49

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Executive Committee, 1882-83.

CHARLES ELIOT NORTON, *President.*

MARTIN BRIMMER, *Vice-President.*

FRANCIS PARKMAN.

W. W. GOODWIN.

H. W. HAYNES.

ALEXANDER AGASSIZ.

WILLIAM R. WARE.

HENRY L. HIGGINSON, *Treasurer.*

E. H. GREENLEAF, *Secretary.*

REGULATIONS

ADOPTED MAY 17, 1879.

1. The Archæological Institute of America is formed for the purpose of promoting and directing archæological investigation and research,— by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A.M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

LIST OF MEMBERS
OF THE
ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FOREIGN HONORARY MEMBERS.

HEINRICH BRUNN	Munich.
ERNST CURTIUS	”
KARL HUMANN	Smyrna.
G. C. C. MASPERO	Cairo.
THEODOR MOMMSEN	Berlin.
C. T. NEWTON	London.

LIFE MEMBERS.

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13

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17

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ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FOURTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE.

*TO THE MEMBERS OF
THE ARCHÆOLOGICAL INSTITUTE OF AMERICA:*

THE statement concerning the operations of the Institute contained in the Bulletin issued in January last covered the work accomplished up to the close of 1882.

Since then Mr. Bandelier has prosecuted his researches in New Mexico, steadily increasing the sum of knowledge concerning the number, the distribution, and the local peculiarities of the ancient pueblos, and gradually accumulating the information upon which conclusions with respect to the mutual relations and the migrations of the various branches of the native stock, as well as to the limits of their civilization, may be safely based. His official letters containing the summary report of his work will be printed in the forthcoming Bulletin, No. II. In a letter dated San Juan, Apache Co., Arizona, April 9, 1883, he says: "I begin to see that the current of migration has divided, — one branch, and perhaps the

main one, passing into Sonora, the other into Chihuahua. I intend now to follow both lines. From Tucson, to which place I am now on my way, I shall go *via* Georgetown to Chihuahua, and thence to Casas Grandes. After completion of my work there I shall return to Tucson, and thence ride down zigzag through Sonora, Sinaloa, Michoacan, &c., to the City of Mexico. From this city I propose to turn upward again, following the route of Cortés to Vera Cruz, and thence along the coast *via* Cintla, Misantla, Papantla, through the Huasteco country to Monterey. In that manner I shall have surveyed the whole of Mexico north of the 19th parallel of latitude. . . . I must go slowly. At every step something calls for attention. Much of this is new and important ground."

Should Mr. Bandelier be able to accomplish this proposed journey during the present year, one of the most important objects of the Institute in the investigations intrusted to him will have been attained. A general survey of the Pueblo settlements from their northern limit as far as the City of Mexico will have been made by a competent observer, and many points hitherto in doubt, not only in regard to the Indians, but also concerning the early Spanish discoveries and settlement of the country, will have been determined.

The "Americanization" of New Mexico is advancing so rapidly, and Mexico herself appears so ready to modernize herself by adapting her modes of life to the requirements of an extended railroad system, that it

seems probable the next few years will do more to antiquate the past of aboriginal and Spanish Mexico than the three preceding centuries have done. It is fortunate that the work in which Mr. Bandelier is engaged was not longer deferred.

The proposed celebration in the course of the coming summer of the three hundred and thirty-third anniversary of the settlement of Santa Fé will increase the interest felt in the history of New Mexico, and will probably lead many travellers to visit this part of the United States, now made easily accessible by excellent and well-conducted railroads. In order to answer a demand which has already come from Santa Fé, a second edition of Mr. Bandelier's Report on Pecos has been printed, as the best guide to the locality for strangers desirous of learning the history and understanding the character of this once important Pueblo.

In the last Annual Report a partial analysis was given of the long and valuable report which Mr. Bandelier had prepared upon his studies in Mexico in 1881; and it was stated that this report was then in the press and would, it was hoped, be soon in the hands of the members of the Institute. Owing to lack of means to complete the printing, this hope remains unfulfilled. Nearly one half of the report is in type; but a sum of not less than five hundred dollars is needed to complete the work with its required illustrations. No study of equal thoroughness has ever been made of the great pyramid of Cholula; and not

only in regard to that extraordinary monument of aboriginal civilization, but also in respect to the remarkable decorated houses of Mitla, and other remains of archæological interest, Mr. Bandelier's paper contains novel and interesting information. Your Committee feel that it is alike unjust to Mr. Bandelier and unfortunate for the credit of the Institute that a report of such value to students of American antiquities should remain unprinted. The prospective regular income of the Institute for 1883-84 will not, however, permit expenditure for this purpose; and your Committee earnestly solicit from the members a special contribution to defray the cost of giving to the public a work which would do honor to its author and the Institute alike, and which ought not longer to be left in manuscript.

The work of our expedition at Assos was suspended during the month of January on account of the inclemency of the weather, and Mr. Clarke, Mr. Bacon, and Mr. Koldewey were able to secure a much needed vacation after the protracted labors and privations of the preceding year. Mr. Clarke returned to the site at the beginning of February, in order to gain as much time as possible for the work of the final season of explorations. Operations were, however, much impeded during that month by rough weather. The prevailing cold north wind prevented labor upon the summit of the Acropolis; but some progress was made

in the excavations upon the comparatively sheltered southern slopes of the hill on the Stoa plateau, in the lower town, and around the walls of the ancient city. In the course of March, as the spring advanced, thirty or forty men were at work, and the explorations were pushed forward with energy, and added interesting details to the general plan of the ruins.

The term fixed by the firman under which the investigations have been carried on expires in the course of the present month, and all that will remain to be done at Assos will be to close the works, to complete drawings, and to make the division with the Turkish authorities of the antiquities discovered by the Expedition. The instructions originally given to the director of the Expedition to deal with scrupulous honesty with the Turks, and to comply literally with the terms of the firman, have been strictly followed, in spite of the example of other expeditions, and of the temptations afforded to secure by underhand dealing antiquities of great interest to Western scholars. Your Committee have some reason to believe that this course has been appreciated by the Turkish authorities. The distinguished Minister at Washington of the Sublime Porte, Aristarchi Bey, to whose good offices the Institute has been already indebted, has promised his intervention with his government to promote a favorable consideration of the desire of the Institute that the sculptures of the Temple should be ceded to it; and the Department of State

of the United States has given instructions to our Minister at Constantinople, the Hon. Lew Wallace, to make such representations to the proper authorities of the government to which he is commissioned as may indicate the interest taken by the United States in the matter, and may lead to such a solution of the difficult question of the division of the objects discovered as shall satisfy the legitimate desires of the Institute and of American students of antiquity.

In order to promote the acquisition of as large a share of the antiquities as possible, the Trustees of the Boston Museum of Fine Arts have voted to place the sum of two thousand dollars in the hands of Mr. Clarke for the purchase and transportation of such of the objects as he may deem of most importance to secure. They have done this with the understanding that, in accordance with a vote of the Executive Committee, the objects falling in the division by right to the Institute shall be presented to the Museum. The Committee will ask the Institute to ratify this vote.

The study and preparation for publication of the inscriptions found at Assos have been committed to the charge of Dr. J. R. S. Sterrett, now a member of the American School at Athens. Dr. Sterrett has already qualified himself by special studies for this task; and the Committee, in confiding to him this important portion of the discoveries of the Expedition, have reason to expect that his work in the arrangement

and elucidation of the mass of epigraphical material from Assos will throw much light upon the history of the city.

The study of the geology of the Troad, begun by Mr. J. S. Diller in 1881, was continued by him during the summer of 1882. It has added much to what was known of a region almost as interesting in its geological features as in its historical relations, and which had not previously been thoroughly investigated. Mr. Diller's "Notes on the Geology of the Troad," published as an Appendix to Mr. Clarke's first Report, will be supplemented and completed, it is hoped, by further Notes to accompany the final Report of the Expedition.

Mr. J. H. Haynes, who during the past year has been teaching at Roberts College, Constantinople, went during his vacation in April to Assos, in order to photograph the site in its present aspect, as also the more interesting objects of antiquity which have been unearthed in the course of the past months. In connection with the large series of photographs taken by Mr. Haynes in 1882, those of the present year promise to make the photographic record of the work ample and satisfactory.

Professor Jebb, of Glasgow, has published an account of his "Tour in the Troad" in the "Fortnightly Review" for April of the current year. The passages relating to his visit to Assos are of such interest as an independent account of the work accomplished by your expedition, that they are reprinted herewith as

an Appendix. It is gratifying to receive this testimony to the interest and importance of the investigations at Assos from a scholar of such eminence and so competent to pronounce judgment.

The following extracts from recent letters from Mr. Clarke exhibit the latest results of the labors now drawing to a close :—

Assos, April 4, 1883.

ON my return here from Constantinople last week (just too late to send you a letter by the preceding mail), I found that the work was going on admirably. It is nearly three weeks since I have written you an account of its advance, and there is much to say concerning it. A large number of transportable antiques have been found, — some of the most interesting since my return.

First among these are to be mentioned thirteen *archaic figurini*, found in a sarcophagus (No. 87 of those opened). Eight of these are apparently types of Aphrodite, six sitting, and closely resembling the famed statues from the Sacred Way of Miletos ; two standing, and holding up their dresses with one hand, while the other presses a blossom to the bosom, — reminding one of the figures from the acroteria of Ægina. The drapery and faces are markedly archaic : knotted hair, full, projecting eyes, set smile, etc. In view of the great frequency of *archaistic* figures of similar type I should have hesitated in terming these hieratic types *archaic*, were it not that four of those remaining are *genre* figures, and have exactly the same artistic characteristics. I have never studied up the question of archaic figurini, but am decidedly under the impression that genre subjects were never *archaistic*, — that peculiar treatment being due and restricted to sacred representations. These four are female musicians, standing, — two flute-players, one in whose hand there is a *crotalon*, and one who must have held

a lyre, *barbiton*, or similar instrument. They are charming types, extremely interesting. It is a pity they are so small, only 15 cm. high; but the models were well cut and perfected by hand. The thirteenth I can at present not satisfactorily explain: it is a female figure standing, wearing a very high tiara, and having upon the breast a medusa, gorgo, or sun-face. It has a very Oriental appearance, and will readily be recognized by a comparison with similar works. Its drapery is curiously polygonal; but I will not attempt to give a detailed description of any of these figures, as Mr. Haynes will be here in three weeks with a lens for the camera which will take them of full size.

With them was a figure of a dog, also archaic; eight *lekythoi*, one painted, very roughly, in *black* figures (old style), with the representation of a funeral ceremony; the others with anthemions, etc.; further, three beautiful Phoenician glass vessels, of a common kind (I mean to say, of a kind often seen in Museums), and some worthless fragments of bronze.

Other sarcophagi have been opened, and rough pottery taken from them, but no object of special value. I found the other day, just below the agora, a very curious and, so far as I know, unique monument, — a large stone slab upon which are carved with great care and exactness four roof-tiles; *imbrices* and *tegulae* of two entirely different kinds. The stone is very large (six feet by three perhaps; I have not yet measured it), and bears the marks of dowelling for objects of metal and inscriptions which were once attached to it. It is a most welcome parallel to the blocks of measures, and gives without doubt the normal standards for the manufacture of tiles in this district. The stone is broken in two, but will well repay transporting. Among the single discoveries I should again speak of the great numbers of coins which the present system of small rewards brings into our hands. Among them are some very fine ones, notably a silver coin of Assos in absolutely perfect preservation.

The architectural gains have fully kept step with these discoveries. The ancient approach to the agora — in use before the building of the heroön — has become evident, ascending by an inclined plane, in later times filled in. At the west of the stoa a very complicated aggregate of pedestals, steps, etc., has been laid bare, this end of the agora being now entirely finished ; it was separated from the remainder of the place by the steps which, it is now evident, ran across the *entire front* of the stoa. The western end of the great reservoir basin in front of it has been dug out, and the cavity is found to have been divided by a longitudinal wall to bear the lintels with which it was covered. That is to say, it is now certain that the place extended over the reservoir, which was ceiled. At the eastern entrance to the agora men are still digging to ascertain whether the great propylæa — or entrance arch as it should more properly be called — had more than one opening. Two more rooms of the Greek bath are now being cleared out ; in one of them there seems to be a pavement, but as yet it is impossible to judge of its character. . . . One more gate of the fortifications has been exposed, and a pit dug to its sill. I hope to be able to draw it in a few days. I have finished my second series of measurements of the temple with a very heavy steel tape, which I propose to have tested by some public standard. . . .

April 7, 1883.

A CHANGE in the mails causes me to write you only four days after my last letter ; as Friday was rainy, I have only three days' work to report. We have been, however, quite fortunate during that time, opening a number of fine sarcophagi. The first discovery of note is a most charming, perfectly preserved, figurine of a horse and rider. To my mind it belongs to the most advanced age of Greek art. Mr. Koldewey thinks he can perceive archaic reminiscences. The little statue is truly beautiful. A naked boy sits upon the back of a proudly out-stepping horse, in an easy, graceful posture.

The animal has a plume of some kind upon his head, the bridle being painted in black lines. The boy's body is pink all over, his hair is rich reddish-brown, eyebrows and lids black. The figure, as before said, is perfect in preservation; it has not a nick or scratch. In a sarcophagus near it were found four whole glass vessels, a pitcher, with walls not much thicker than this sheet of paper, — certainly not as thick as a postal-card, — a cup of peculiar square shape, and two *lekythoi* (as you see I am uncertain how to write the plural of this word in English). A sarcophagus that I opened just before coming down this evening contained a green glass cup, with curious red, ribbon-like veins; a peculiar Assian coin, — I should say of the first half of the fourth century, B. C., — with a mask around the helmet of Athene; an iron stylus quite well preserved in its decayed wooden case; a bronze dish, not yet cleaned, and sundry other minor articles which I must look at in the daytime before describing. Then a considerable fragment of a marble stele has been found, bearing an inscription which evidently says that Quintus Lollius (verily that family abounded in Assos) was honored by a golden crown, and by having his portrait painted upon a marble. The back of the stele is prepared and worked to a panel, which I suppose must have borne the picture in question. It is a pity that we have only such a small piece of the stone. Almost all the men are now working in the Street of Tombs, and Mr. Bacon will on Monday proceed with his survey, for which so much new material has recently been obtained.

The second Annual Report of the Committee on the American School of Classical Studies at Athens, which is herewith presented, will be read with pleasure, for it records the successful organization and actual operation of the School with auspices in all respects

favorable. The hearty co-operation of our leading colleges and universities in the establishment of the School ; the support of the undertaking by the Government of the United States ; the cordial official recognition of the School by the Government of Greece ; the good judgment and energy displayed by the eminent scholar, the first Director of the School, in determining its methods of work and in laying broad foundations for its future usefulness ; the character and zeal of the students who have sought for admission to its privileges,—all these and other concurring favorable conditions afford legitimate reason for confidence that the School has entered upon a useful and honorable career.

Under the present organization of the School, the Director will be changed from year to year, and the advantages and responsibilities of this position will be thus shared by successive professors of different institutions of learning. But it seems unquestionably desirable for the best interests of the School that there should be a permanent official attached to it, to reside continuously at Athens, to occupy a similar position to that held by the permanent secretaries of the Imperial German Archæological Institute. To find a scholar versed in classical literature and archæology competent to fill such a position with distinction, and ready to accept it, would be difficult. But your Committee believe that such a person might be found, and they cannot but regret that the means of the Institute are so

scanty that it is at present unable to provide from its own resources the salary requisite for this appointment. They desire to commend in the strongest manner to the consideration of the members of the Institute, and of persons interested in classical studies, the creation of a fund sufficient to secure an annual salary of not less than \$3,000 for such a secretary of the School. No foundation would, in their judgment, be likely to be of more service to the advance of learning in America than this. They venture, therefore, to appeal to the richer portion of our community to provide the Institute with the means for this object. It would be a distinction greatly to be coveted to have established a foundation of this sort, which might perpetuate the name of its founder through successive generations as that of one who had not merely the means, but the will, to contribute toward the certain promotion of the higher intellectual interests of his country, and to add to the resources of that culture, and to the forces of that spirit on which the dignity and the rank in civilization of a community prosperous in material respects beyond historic example, essentially depend.

It is with great satisfaction that your Committee call your attention to the names of the Foreign Honorary Members which appear at the head of the list of members of the Institute. The distinguished scholars who have done us the honor to accept this membership have expressed their interest in our work with a cordial sympathy which compels us to recognize their confi-

dence that our efforts in the field which we occupy will be not less productive of good results in the future than in the past. Your Committee have determined to limit the number at any one time of Foreign Honorary Members to twenty, in order that the choice may confer distinction and indicate a recognition on the part of the Institute of the special value of the services rendered to archæology by the scholars who may from time to time be selected.

The number of ordinary members has been considerably increased during the past year, and, as will appear from inspection of the list, especially in New York.

This increase of membership in New York is in large part due to the issue of an Address signed by a large number of eminent representatives of the intelligence, learning, and wealth of the city, commending the work of the Institute to the support of those "New Yorkers who desire that their city shall hold an honorable position in furthering the cause of higher culture." This Address, which many of the members of the Institute may not have seen, is reprinted as an Appendix to the present Report. The best thanks of the Institute are due to Mr. Thomas W. Ludlow and Mr. Frederick J. De Peyster, for their continued and important services in promoting its interests in this and in other ways.

The following statement gives a condensed view of the income and expenditure of the Institute during the past year.

Receipts and Expenditures, May 1st, 1882, to May 1st, 1883.

DR.

To salary and expenses, A. F. Bandelier . . .	\$2,428.90	
“ Helio-type Printing Co., plates for Mexican Report	28.00	
		<u>\$2,456.90</u>
“ salary of J. T. Clarke	1,100.00	
“ expenses of Assos Expedition, including salary of F. H. Bacon	7,790.86	
“ photographic apparatus for Assos	63.37	
		<u>8,954.23</u>
“ plates for Assos Report		392.00
“ printing Assos Report		920.41
“ printing Third Annual Report		109.92
“ printing Bulletin I., and plates		178.51
“ sundry expenses, advertising, printing, postage, salary of Secretary, and all other expenses		538.52
“ balance to 1883-1884		154.02
		<u>\$13,704.51</u>

CR.

By balance from the year 1881-1882	\$2,944.15
“ Annual Subscriptions	2,230.00
“ Life Membership Subscriptions	1,300.00
“ donations for American work	200.00
“ donations for Assos work	5,620.00
“ donations for unspecified work	1,244.00
“ received from sale of Reports	85.79
“ interest	80.57
	<u>\$13,704.51</u>

For the coming year the Institute has no positive prospect of income beyond that derived from the fees of Annual Members. This amount cannot be

reckoned at over \$2,200, and it is plain that such a sum is insufficient for the actual needs of the Institute, and utterly inadequate to enable it to enter upon any new undertakings.

The prospective expenses of the Institute for 1883-1884 may be summarized as follows :—

Salary and expenses of Mr. Bandelier	\$2,400
Salary of Mr. Clarke and Mr. Bacon while engaged in the preparation of the final Report on the Investigations at Assos, \$1,000 each	2,000
Printing of the Final Assos Report	1,000
Salary of the Secretary	400
Printing of Annual Report, of two Bulletins, and other incidental expenses	400

It thus appears that the sum of \$4,000, at least, is required to carry on the work of the Institute, without any attempt at fresh investigations.

It will be necessary to raise this sum by subscription or by other means. Your Committee request the assistance of the members in the labor of obtaining it.

The close of the explorations at Assos requires fresh consideration of the future plans of the Institute. It has become evident during the past five years that such a body of Annual Members is not to be obtained as shall provide a sufficient income for continuous costly investigations. From year to year the Committee has been obliged to make applications to the public for the means to carry on the work.

They find themselves in this position to-day. They are unwilling to repeat such appeals, and they have resolved that this shall be the last, at least until a considerable period of years shall have elapsed. But it must be matter of regret to the members of the Institute, no less than to the Committee, to be obliged thus to hold their hands in the prosecution of labors by which knowledge of the past is increased and the interests of learning advanced. It cannot but be felt as a matter of reproach to a community so wealthy and so generally intelligent as our own, that, after the Institute has shown itself capable of conducting investigations so interesting and so successful as those which it has directed in this country and in Asia, it is left without the means to carry out new investigations of a similar nature, and is compelled to withdraw from fields in which so much still remains to be explored, and to leave to others to reap a harvest of results of which America ought to be desirous to partake at least in part, for herself.

CHARLES ELIOT NORTON, *President.*

MARTIN BRIMMER,¹ *Vice-President.*

FRANCIS PARKMAN.

WILLIAM W. GOODWIN,¹

HENRY W. HAYNES.

ALEXANDER AGASSIZ.

WALTER D. R. WARE.

WALTER HIGGINSON, *Treasurer.*

H. GREENLEAF, *Secretary.*

EXECUTIVE COMMITTEE.

Responsible for this Report.

APPENDIX I. SEE p. 32.

ADDRESS ISSUED IN NEW YORK.

NEW YORK, March, 1883.

THE expedition to the old Greek city of Assos, organized and supported by the Archæological Institute, is the first contribution of America to the world's knowledge of classic civilization. Of the work of this expedition, such eminent Hellenists as Professors Goodwin and Jebb, who visited Assos in September, say that the remains now visible give a clearer view of the life of an ancient city than even Pompeii itself. Drawings illustrating some portion of what has been accomplished at Assos, are now on exhibition at the Metropolitan Museum of Art.

While prosecuting abroad researches so honorable to American classical scholarship, the Institute has not lost sight of the study of the aboriginal antiquities of our own country. It is now conducting, and hopes to push actively, investigations in New and Old Mexico, and in Yucatan. The Pueblo Indians are fast dying out. Their communal dwellings are disappearing before the advance of mining and railroad engineers, and all memory will soon be lost of their ancient institutions, traditions, and language. Soon it will be too late.

The Institute needs money, and at once. Its annual dues of \$10 (which may be compounded by a single payment of \$100, entitling the donor to life membership) are insufficient for the prosecution of its work with all the vigor desirable,

and even for adequate scientific publication of the results achieved already in Asia Minor and in New Mexico.

It is hoped that all New Yorkers who desire that our City shall hold an honorable position in furthering the cause of higher culture, will add their names without delay to the roll of the Archæological Institute. Subscriptions and notifications of adhesion can be sent to Robert Hobart Smith, Esq., No. 40 Wall Street (until May 1. After May 1, No. 58 Wall Street).

F. A. P. BARNARD.
 JOHN W. BURGESS.
 GEORGE WILLIAM CURTIS.
 WILLIAM E. DODGE, JR.
 HENRY DRISLER.
 EDWIN L. GODKIN.
 JOHN TAYLOR JOHNSTON.
 EDWARD F. DE LANCEY.
 ROBERT E. LIVINGSTON.
 THOMAS W. LUDLOW.
 HENRY G. MARQUAND.

AUGUSTUS C. MERRIAM.
 FREDERICK LAW OLMSTED.
 FREDERIC J. DE PEYSTER.
 HENRY C. POTTER.
 THOMAS R. PRICE.
 WILLIAM C. PRIME.
 CHARLES SHORT.
 RUTHERFURD STUYVESANT.
 CORNELIUS VANDERBILT.
 WILLIAM R. WARE.

APPENDIX II. SEE p. 25.

EXTRACT FROM A TOUR IN THE TROAD BY
PROFESSOR R. C. JEBB.

(From the Fortnightly Review, April, 1883.)

IN a recent visit to the Troad which I made in company with Professor W. W. Goodwin, of Harvard University, at present Director of the American School of Classical Studies at Athens, one of our objects was to see Dr. Schliemann's excavations at Hissarlik, the site which he supposes to be Homer's Troy. But there was another point of equally strong attraction. The site of the ancient Assos, on the south coast of the Troad, has within the last two years been explored by American archæologists, under the able direction of Mr. J. T. Clarke, with results of very remarkable interest.

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Passing down the west coast, we crossed the classic river, Satnioeis, now called the Touzla ("salt"), at the place where small basins have been constructed for evaporating the salt. A number of camel-drivers were waiting for their loads, to be carried to Alexandria Troas, Babà-calessi (Lecton), or Assos. The ancient salt-works of Tragasæ were near here. A little higher up the river there are some remarkable springs from which the salt water issues at more than boiling heat, throwing up a cascade four feet high. Feathers strewn on the ground mark a spot where the natives avail themselves of these means to boil (and salt) their chickens. At Kulaklee

near this, some Corinthian capitals and other fragments mark the site on which stood the temple of Apollo Smintheus. Striking across the southwest angle of the Troad, we came out on the south coast, and turned eastward along it, parallel with Lesbos. The last stage of the last day's journey was made by night. There was a brilliant full moon, and the highlands of Lesbos, across the narrow strait, were robed in soft azure tints. It was after midnight when the great crag of Assos loomed up in front; the tired horses picked their way down a rough and steep path to the seashore; and we were hospitably received at the quarters of Mr. Clarke and his fellow explorers, close to the sea.

The site of Assos is one of the most magnificent in all the Greek lands. From the very edge of the waves, where the strait between Lesbos and the Troad is narrowest, an isolated rock springs to a height of more than seven hundred and fifty feet. It looks like what it is, the crater of an extinct volcano. Late in the Tertiary period, the limestone of this south coast of the Troad was covered by two successive flows of trachyte. That volcanic upheaval formed the high and narrow plateau which runs parallel with the gulf from east to west, walling off the valley of the Touzla from a thin strip of seaboard. The rock of Assos, washed by the sea, is like a tower standing detached from that line of mountain-wall. Its seaward faces, to south and southwest, are carved into terraces. This is not simply human handiwork. Trachyte has a natural cleavage into joint planes, vertical or horizontal; and ages before man quarried or built, a natural process of scarping had begun on the cliff. Shelves were thus prepared, which a little skill could easily shape; and so, high up on the brow of this trachyte cone, the Greek town of Assos arose, with its colonades, baths, theatre, its broad public walks, and its monuments of the dead, mounting tier above tier, till the very summit of the crag was crowned with a Doric temple of Athenè. Never, perhaps, had temple a grander site. On

the first day of our visit we ascended from the seashore by a very steep winding path. From the summit, where the temple stood, Lesbos is seen in front; its great peak, Lepethymnus, was then lit up with the sunset colors. The whole south-coast line of the Troad appears, sweeping round the inmost recess of the gulf, as it bends sharply southward along the old realm of Pergamon, whose king gave Assos to Rome. The great heights of Ida rise in the east. Northward, the Satnioeis is seen winding through the yellow fields and verdure of its rich valley, from a rugged gorge in the east to the oak-forests in the folds of the western hills. St. Paul, on leaving Alexandria Troas, came overland to Assos, while his fellow-travellers went thither by sea.¹ The road by which he would have come traverses this valley of the Satnioeis. The northwest gateway of the town, to which the road led, is still flanked by two massive towers. They are Hellenic, of an age which leaves no doubt that they are the very portals through which St. Paul passed into Assos. On the shore below, large blocks under the clear water still mark the ancient mole at which he re-embarked with his companions for Mitylene.

This harbor of Assos was, and is, the only one on the fifty miles of coast between Cape Lecton and the east end of the gulf. Assos was too much off the highways to become a focus of import trade, but it was the chief outlet for such exports as the South Troad could boast. It is so still. The Turkish manufacture of cutlery flourishes at Babà-calessi (Lecton), but Beihràm (Assos) is the place to which trains of camels from all parts of the country bring their loads of valonia, — the acorn-cups of the *Quercus agilops*, used in tanning. Dread of piracy caused many of the oldest Greek towns to be built at some distance from the sea. The crag of Assos, though on the water's edge, had nothing to fear. It was thus predestined to the life of a commercial town, — orderly, conservative, content with a modest provincial pros-

¹ Acts xx. 13, 14.

perity, and not much troubled by external politics. Æolic colonists from Methymna — once the chief town of Lesbos, on a headland to the west across the narrow strait — are said to have planted the first Hellenic settlement here, perhaps as early as 1000 B. C. Usually safe against minor assailants, Assos passed from one to another of the greater powers. Lydians, Persians, Romans, Ottoman Turks, have in turn been its masters. During the most vigorous age of Greece, from the Persian wars to the rise of Macedon, Assos enjoyed at least partial independence. An interesting fact in its history belongs to the close of that period. Persian impotence had allowed one Eubulus to make himself despot of Assos and of Atarneus, the chief town of the Mysian corn-lands. At his death he was succeeded by the eunuch Hermeias, an ex-slave, who had latterly been his minister. On the invitation of Hermeias, who had been a pupil of Plato, Aristotle spent three years at Assos, about 348–345 B. C. Hermeias was seized by Persian treachery, carried to the court, and crucified. In some noble verses of an invocation to Aretè (Virtue), Aristotle numbers this “son of Atarneus” with men who have suffered for her sake, predicting that his memory will live by grace of the gods who honor generous hospitality and loyal friendship.¹ In glancing at the story of Assos, we should not forget that it can probably be traced back beyond Hellenic times. “Steep Pédasos,” “on the Satnioeis,” figures in the Iliad as the capital of the Leleges, who inhabited the south coast of the Troad. Altes, father-in-law of Priam, reigned here, and the town was sacked by Achilles in a raid from Ida.² The ending of Péd-*asos* may be recognized in Assos. It means “dwelling,” “town,” being connected with

¹ Bergk, “Lyric Poets,” p. 520. I have not called the ode a “pæan” to Hermeias, as its class can hardly be determined; but evidently, I think, it was composed expressly to honor his memory.

² Il. vi. 34, Πήδασον αἰπεινήν, cp. xxi. 87; the Leleges, x. 429; Achilles, xx. 92.

the Sanskrit *vas*, "to dwell" (whence, through *vāstu*, the Greeks got their *astu*, "town"), and occurs, as Fligier has shown, in old town-names from India to Dacia. In Greek the *s* is alternatively single or double, as Mylasa or Mylassa, Eresos or Eressos, Larisa or Larissa. Another recent identification by Mr. Clarke in this neighborhood may be fitly noticed here. Several old writers mention a shrine of the hero Palamedes at a town called Polymédion, doubtless originally Palamédeion. Mr. Clarke has just discovered the site, hitherto unvisited by any modern traveller, on the coast between Assos and Cape Lecton. The shrine of Palamedes proves to have been a sacred *grove* (*temenos*) on the acropolis, and Mr. Clarke has been able accurately to measure the inclosure. The statue of the hero stood on a rock exactly at the middle of the southern edge, rising upward of a hundred feet above the channel between the Troad and Lesbos.¹

Few visitors to the Louvre — if they care for sculpture — will forget the bas-reliefs from the temple of Assos which Sultan Mahmoud II. gave to France in 1838. Those in the second line from the floor exhibit Centaurs. The fore-legs have been injured, but were plainly horse's legs. This was the later type. The Centaur of archaic sculpture had equine hind-legs only, the fore-legs being human. The American explorers at Assos have found fragments forming eight complete reliefs from the same building and series. In one of them Heracles is fighting with Centaurs who have human fore-legs. Here, then, we have a very curious example of provincial indifference to unity of detail even in the most conspicuous features of decorative sculpture. The newly found reliefs present a pair of splendidly executed sphinxes, crouching face to face. They once adorned the lintel above the two

¹ Mr. Clarke also writes to me of another very interesting discovery which he has lately made, — that of extremely ancient town walls on the very top of Gargarus, the highest peak of Ida. Details regarding both this and Polymédion will be published by him shortly in a paper of the Archæological Institute of America.

central columns of the temple front. As the Sphinx occurs also on the Assos coins, the local meaning of these creatures was obviously heraldic, like that of the two lions rampant over the gate of Mycenæ. Other examples of dualism in civic armorial bearings were the two crows of the Thessalian Crannon, the two axes of the Carian Mylasa, and the two heads of Tenedos. In the Assos sphinxes the Egyptian origin is marked by the head-dress; also they have wings, — thus disproving the theory that the sphinx of Greek art had been wingless until the Attic poets popularized the Egyptian form. The Assos sculptures — one of the most important links yet found between Oriental and Greek art — have two general traits. First, the animals are often good and vigorous, while the human forms are comparatively rude and stiff; this recalls Assyria. Next, distinctly archaic work appears as coeval on the same building with work not only of higher skill, but of riper conception. As regards the temple itself, — built, perhaps, not earlier than about 470 B. C., — its plan has now for the first time been completely and scientifically determined. It is the only known Doric building of its class in Asia Minor, except a much later temple at Pergamon. For the history of some details in the Doric style its interest is unique.

These, however, are but a small part of the results attained in 1881 and 1882. Ascending the crag from the seashore, we first reach the site of the ancient theatre; on a terrace above that, the baths; and on a terrace higher yet, the market-place, once flanked by a splendid colonnade, with a Doric temple (the second of the town) near it, and the public treasury. West of this, the later Hellenic town-walls climb the steep side of the citadel. Notwithstanding some recent damage from the Turks, they are well preserved for nearly two miles. With their ramparts, towers, and posterns, they form the finest and most instructive examples extant of Greek military engineering. Outside the walls to the west, the "street

of tombs " rose in three terraces above the road already mentioned as that by which St. Paul must have approached Assos. Handsome public seats (*exedraë*) were placed here and there on the broad spaces left between the sarcophagi. Here, when the day's work was over, the people of Assos could watch the sunset change the hues on Lesbos, on the high iron-bound coast in front, and on the channel spreading out far below them to the open *Ægean*. All these remains have now for the first time been thoroughly explored.

Mr. Clarke gives us reason to hope that the labors of the expedition which he has directed will be recorded in a complete volume on Assos and the Southern Troad. It will be looked for with keen interest by those who have read his admirable report, and most of all by those who have also seen the works in progress on the spot. They alone can fully appreciate the energy, resource, and self-denial which, under circumstances of much difficulty and discouragement, have enabled manifold ability to reap its reward. The Archæological Institute of America may well feel gratified by the result of an enterprise commenced under its auspices. It is Mr. Clarke's intention to continue excavating this year for as long as his firman permits. Though Assos is only two degrees north of Olympia, the digging season has to be reversed. In the climate of the Troad, it begins with April and ends with October.

Bound homeward, we parted from our friends at Assos, and crossed in an open sail-boat to its mother city in Lesbos, Methymna, — now Molivo, — with a castle on a headland : the passage was made in about three hours and a half ; thence the steamer took us, by Mitylene, to Smyrna.

ARCHAEOLOGICAL INSTITUTE OF AMERICA.



SECOND ANNUAL REPORT

OF THE

COMMITTEE ON THE AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS.

SECOND ANNUAL REPORT
OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

*TO THE EXECUTIVE COMMITTEE OF THE
ARCHÆOLOGICAL INSTITUTE:*

GENTLEMEN, — In the year that has passed since the Committee had the honor to offer its first Report, the plan of organization of the School of Classical Studies there presented has been successfully carried into execution. The School has been established in Athens, and has passed through the critical period of the first year of its existence with credit; at home its interests have been administered with care, and it has been strengthened by the generous support of new friends.

In addition to the nine Colleges already reported, five others have accepted the invitation of the Committee to co-operate in the support of the School, — Dartmouth, Cornell, Michigan University, the University of Virginia, and the University of California. Four others to whom the invitation was sent have not

yet made final answer, — Union, Williams, Bowdoin, and the Massachusetts Institute of Technology. The supporting Colleges now number fourteen. Their subscriptions amount to \$3,500 annually, which will be the income of the School during its second year. These subscriptions were made in the majority of instances, not from the funds of each College, but through the generosity of its alumni and other friends. Some of them are made for a shorter term than the ten years during which the School is to be maintained on its present plan, but with the hope on the part of the gentlemen having them in charge that they will be continued during the entire period. The earnestness shown by the friends of Classical Studies in obtaining support for the School, and the almost uniform success with which their efforts have been attended, is an encouraging omen of its ultimate permanent endowment.

At its first semi-annual meeting, held in New York on Nov. 17, 1882, the Committee unanimously invited Lewis R. Packard, Hillhouse Professor of Greek in Yale College, to become the Director of the School during its second year; and the invitation was accepted. The continuance of the direction of the School with scholarship and vigor is thus happily assured. At this meeting Professor W. S. Tyler of Amherst College, and Professor J. C. Van Benschoten of Wesleyan University, were made members of the Committee. Professors Packard and Gilder-

• sleeve and Mr. Ludlow were appointed a sub-committee on the Publications of the School, to report at the semi-annual meeting in May. The post-office address of the Secretary of the Committee was announced to have been changed to Yonkers, N. Y. The addresses of the Chairman and Treasurer remain as heretofore.

The School was opened by the Director, Professor W. W. Goodwin, at Athens, Oct. 2, 1882, in a roomy and convenient house on the 'Οδὸς Ἀμαλίας. This house is occupied by the Director and his family; but one large *salon* is devoted to the exclusive use of the members of the School, as library and reading-room. The house was taken empty, and has been furnished by the Committee at an expense, approximately stated, of \$1,075. It proved to be impossible to find, as was first intended, a suitable house already furnished. The other expenditures of the Committee,—all the items except the first being stated approximately,—have been \$1,000 to the Director for house-rent, \$1,225 for books, and \$200 for incidentals. The total amount of the expenditure, \$3,500, is therefore in excess by \$500 of the present year's income. The Committee, however, felt justified in trenching upon the income of the second year, since during that year the receipts of the School would be larger, \$3,500, and the outlay for furniture inconsiderable. The library now numbers about 400 volumes, exclusive of sets of periodicals. Some of these the School owes to

the generosity of the Hon. Eugene Schuyler, Minister of the United States to the Kingdom of Greece, who has in many other ways also furthered its interests. The School is likewise indebted to the American Philological Association for the gift of a complete set of its Transactions. In the opinion of the Director, urgently expressed in many letters, the library should be largely increased at once. It is hoped that this may be done by contributions from friends of the School, made independently of the annual subscriptions. The Committee will be able from the funds at its disposal to enlarge the library only slowly and gradually. A new and considerable item of expense in subsequent years will be the cost of its own Publications.

There have been seven regular members of the School during the past year. Besides these, Dr. Bevier of Baltimore has, according to the terms of the circular issued in May, 1882, enjoyed its privileges during the winter without being regularly enrolled. The regular members of the School have been the following:—

John M. Crow, A. B. (Waynesbury College), Ph. D. (Syracuse University).

Harold North Fowler, A. B. (Harvard University, 1880).

Paul Shorey, A. B. (Harvard University, 1878), holder of the Kirkland Fellowship in Harvard University.

J. R. S. Sterrett, University of Virginia, Ph. D. (Munich, 1880).

F. H. Taylor, Wesleyan University.

James R. Wheeler, A. B. (University of Vermont, 1880),
Graduate Student of Harvard University.

Frank E. Woodruff, A. B. (University of Vermont, 1875),
B. D. (Union Theological Seminary), holder of a Fellowship in the Union Theological Seminary.

The majority of these gentlemen had already studied abroad, some of them for a period of years, when they became members of the School. All of them will complete a full year's work except Mr. Woodruff, who was called during the winter to a professorship in the Andover Theological Seminary, and found it necessary to leave Athens for Germany.

Each member has pursued some definite subject of study, and will finally embody the results of his work in a thesis, which may be published in the Bulletin of the School. Dr. Sterrett, for example, is to edit the inscriptions found at Assos by the explorers despatched thither by the Institute; Mr. Wheeler is investigating the Theatre of Dionysus, after a new survey begun by Ziller and completed by Mr. Bacon of the Assos Expedition; Mr. Shorey has made studies preparatory to an edition of Theocritus; Mr. Fowler will present a thesis upon the Erechtheum; and Dr. Crow, aided by Mr. Clarke, leader of the Assos Expedition, with a careful survey, hopes to settle definitely some of the vexed questions relating to the Pnyx.

Each Wednesday evening since November a meeting has been held at the library of the School, at which

a paper was presented by the Director or one of the members, which was then discussed. Among the subjects so discussed have been the Olympieum, the Agora, the Battle of Salamis, and the Theseum. The aim has been to investigate some important subject, however well known, a thorough knowledge of which is necessary to the archæologist, and has been forcibly stated by the Director. Under date of 3d December he writes: "I advised the members not to try to write papers on subjects never before discussed; as it is just this striving after the absolutely new which makes most scientific meetings so uninteresting and unintelligible." These meetings have been attended by other persons besides the members of the School, chiefly Americans, who asked to be permitted to come. Meetings have been held each week also, on Friday evenings, for the study of Æschylus and Thucydides. The Director speaks in the highest terms of the industry and enthusiasm of the members.

On Saturdays, excursions have been made to places of historic interest within easy reach of Athens. Longer tours to the Peloponnesus and to Delphi were planned for the last part of the year. In the rule published by the Committee requiring members to prosecute their studies for eight months of the year in Greece, the Director has interpreted "Greece" to mean all places in which Greek settlements were made and in which Greek antiquity can be studied. Under this interpretation Mr. Fowler went to Sicily to visit Syracuse, Agri-

gentum, etc., and Dr. Sterrett spent six weeks at Assos. During the summer Dr. Sterrett is, by special invitation, to go to Asia Minor with Mr. W. M. Ramsay, who is sent out under the auspices of the Society for the Promotion of Hellenic Studies.

As the result of steps taken by the Committee, the Director received an official communication in December from the Secretary of State at Washington, enclosing one from the Hon. John Eaton, United States Commissioner of Education, appointing him an Agent of the Bureau of Education, and recommending him to the kind consideration of foreign officials. But apart from this, the Director has been received with the greatest kindness by all with whom he has had to do, from his Majesty the King of the Hellenes, and his prime minister, to the ordinary citizen. The School is already looked upon with favor as a permanent institution, creditable alike to Athens and to the United States.

JOHN WILLIAMS WHITE,

Chairman.

THE following is a complete list of the publications of the Institute. Those not out of print are for sale by Messrs. Cupples, Upham, & Co., 283 Washington Street, Boston, and by Messrs. Chas. Scribner's Sons and G. P. Putnam's Sons, New York.

- First Annual Report and Papers. 1880. 8vo. Cloth. pp. 163.
 Illust. Out of print.
- First Annual Report of the Executive Committee. 1880. pp. 26.
 Out of Print.
- Second Annual Report of the Executive Committee. 1881. pp. 49.
 Price 50 cents.
- Third Annual Report of the Executive Committee. 1882. pp. 56.
 Price 50 cents.
- Bulletin I. 1883. 8vo. pp. 40. Illust. Price 50 cents.

PAPERS OF THE INSTITUTE.

AMERICAN SERIES I. 1881. Containing, —

1. Historical Introduction to Studies among the Sedentary Indians of New Mexico.
2. Report upon the Ruins of the Pueblo of Pecos. By A. F. Bandler. 8vo. Flexible covers. pp. 135. Illust. Price \$1.00.

CLASSICAL SERIES I. 1882. Containing, —

- Report on the Investigations at Assos, 1881, by Joseph Thatcher Clarke, with an appendix containing inscriptions from Assos and Lesbos, and Papers by W. C. Lawton and J. S. Diller. 8vo. Flexible covers. pp. 215. Illust. Price \$3.00.

Thomas Dow

Archæological Institute of America.

FIFTH ANNUAL REPORT

OF THE

EXECUTIVE COMMITTEE,

AND

THIRD ANNUAL REPORT OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

1883-84.

PRESENTED AT THE ANNUAL MEETING OF THE
INSTITUTE,

Boston, May 17, 1884.



CAMBRIDGE:

JOHN WILSON AND SON,

University Press.

1884.



Archæological Institute of America.

FIFTH ANNUAL REPORT

OF THE

EXECUTIVE COMMITTEE,

AND

THIRD ANNUAL REPORT OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

1883-84.

PRESENTED AT THE ANNUAL MEETING OF THE
INSTITUTE,

BOSTON, May 17, 1884.



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CONTENTS.

EXECUTIVE COMMITTEE	5
REGULATIONS	7
LIST OF LIFE MEMBERS	9
LIST OF ANNUAL MEMBERS	12
FIFTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE . . .	21
APPENDIX : REPORTS OF A. F. BANDELIER	55
THIRD ANNUAL REPORT OF THE COMMITTEE ON THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS	99

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REGULATIONS.

ADOPTED MAY 17, 1879.

1. The Archæological Institute of America is formed for the purpose of promoting and directing archæological investigation and research,—by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A.M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

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OF THE
ARCHÆOLOGICAL INSTITUTE OF AMERICA.

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15

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17

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19

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• The names marked with an asterisk are those of deceased members.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FIFTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE.

To the Members of the Archæological Institute of America :

IN presenting their fifth Annual Report, the Executive Committee feel a legitimate satisfaction in congratulating the members of the Institute upon the completion of its first important expedition, with results such as amply to justify the undertaking, as well as to secure for the Institute permanent repute, and for its agents in the work honorable distinction. The thanks of the Institute are once more due to those of its members who have contributed liberally during the past year, as in former years, to the support of the expedition. Without their aid the success achieved would have been impossible.

The last Annual Report contained an account of the work at Assos up to the spring of 1883. It will be remembered that, after a much needed vacation during those winter months when the inclemency of the weather rendered labor on the exposed site of the ruins impracticable, Mr. Clarke began work afresh

early in February. Excavations were commenced, with eighteen men, at a structure in the lower town, designated upon the plan given in the first report as a "Roman portico," but which on closer investigation proved to be the atrium of a large palace-like dwelling. Although of late date, the building is yet of notable architectural interest, exemplifying the retention of Greek artistic forms far into the ages of Roman political dominion, and showing the application of Hellenic details and principles of design to distinctly Latin methods of construction. It adds another link to the chain of development of classical architecture which our expedition has shown to be perhaps more continuous and more instructively exhibited in the buildings of Assos than at any other known site.

On the 1st of March Mr. Koldewej arrived, and the work was divided between the Agora and its vicinity, and the Necropolis. In both of these localities the excavations were richly rewarded: at the Stoa, Bouleuterion, Heroön, and Greek Bath, by finding inscriptions and architectural fragments which went far towards solving various problems of arrangement and construction presented by these important and unique edifices; and at the Street of Tombs, by the discovery of the finest figurini, vases, and coins obtained during the entire course of the excavations. In March the staff of workmen was gradually increased to forty-five, which number was maintained until the close of the season, the limited outfit of the expedi-

tion making it impossible to equip adequately a larger force with picks and wheelbarrows.

During April the digging was entirely devoted to the Necropolis, under the direction of Mr. Bacon, who had special charge of this interesting portion of the remains. On the 1st of May, the firman having expired, all excavation had to be brought to a close, and the attention of the investigators was directed to the completion of the surveys and technical studies.

Dr. Sterrett, to whose charge the editing of the inscriptions discovered at Assos had been confided, made a careful search for materials upon the site, and studied the inscribed stones previously removed to the magazine at the port. Mr. Haynes, renewing his voluntary services, took nearly one hundred and fifty photographs of the antiquities discovered, and of those features of the city and its vicinity which seemed best adapted to this manner of representation.

Repeated requests to the Turkish Ministry of Public Instruction, that an official agent be sent to divide the antiquities discovered by the expedition, resulted, after many delays, in the appointment of Demetrios Bey Baltazzi as commissioner. A perfectly just settlement, satisfactory to both parties, was effected by that gentleman on the 29th and 30th of June. The method and decisions of the division will be fully described in the forthcoming report; it must here suffice to say that the two finest reliefs discovered, the Heracles with the human-legged centaurs, and the heraldic Sphinxes

from the eastern front of the temple of Athena Polias, were secured for America. The sum of two thousand dollars, appropriated by the trustees of the Boston Museum of Fine Arts to secure for that institution the antiquities from Assos which fell to the share of the Porte, could not be expended on account of the refusal of the authorities to treat in regard to a sale of them. Certain events have lately called the particular attention of the Turks to the material advantages and eminent honor derived from the possession of classical remains, and stringent measures have been taken to prevent all exportation of antiquities from the Turkish dominions. Even permission to carry away those cases of antiquities which belonged to the expedition as the one-third share secured by the terms of the firman, was only obtained with great difficulty and after long delays; and the architectural fragments, which had been granted to the explorers by Baltazzi Bey, were ultimately withheld by higher officials. We trust, however, that permission to remove these blocks will yet be secured.

The division of the antiquities having been made, Mr. Clarke set out on his return to America, while Mr. Bacon remained, in order to complete some of his drawings, and to oversee the shipment of the cases of antiquities to Smyrna and thence to Boston. The delays and vexations attending the shipment were numerous and protracted. The cases reached Boston safely early in the past winter. On the 21st of October

Mr. Bacon left Assos, and the ruins of the ancient town, now one of the most interesting revelations of classical antiquity, were given over once more to neglect, to be covered by the slow hand of time, or destroyed by the more rapid and relentless operations of the Turk. The record that has been secured of them promises to be of longer duration than the monuments themselves.

Mr. Clarke, having arranged and catalogued the Assos antiquities in the Boston Museum of Fine Arts, is now in London engaged in writing his report of the investigations. Mr. Bacon and Mr. Koldewey are employed in working up their surveys and restorations. So abundant and so important are the materials, that the preparation of them for publication must occupy a considerable time.

The total cost of the expedition, — including every expenditure at all connected with the undertaking, — from November, 1880, until May, 1884, has been \$19,121.16. Of this sum \$3,344.53 was directly spent in earthwork, an exceptionally large proportion when compared with the digging of other undertakings of the kind. The remainder was devoted to the travelling expenses and modest salaries of the Institute's agents, and to the general outlay occasioned by the purchase of the household and excavating outfit, by the maintenance of the exploring party, by the transportation of goods and antiquities, and by the expensive official relations inseparable from all work carried on under Turkish jurisdiction.

The preceding statement exhibits clearly the constant and careful economy practised by Mr. Clarke, Mr. Bacon, and their associates, during the three years of their residence at Assos. This economy, requiring steady self-denial, and at times exacting the endurance of personal hardship, was borne by them in the most cheerful spirit, through the sense that, upon the husbanding of scanty resources, the ultimate success of the expedition in the accomplishment of a vast and complex task was in large measure dependent. These gentlemen may indulge a just pride in the result of their efforts and sacrifices, and your Committee desire to acknowledge in the name of the Institute, and in the fullest terms, its obligations to them for the services thus rendered.

The value of the investigations at Assos has lately been affirmed in a manner highly gratifying to the Institute by the action of the Boston Society of Architects, in making a substantial contribution to the means for the publication of the Report upon which Mr. Clarke is now engaged. The President of the Society, Mr. Cabot, in his letter communicating advice of this action, says :—

“ This new exposition of the Greek spirit has proved far more complete than the most sanguine friends of the enterprise had anticipated. It has shown us the Greek architect experimenting with forms, and profuse in invention, yet always with self-denial, and a just reserve of force ; it has given us, perhaps, the best lesson yet derived from Greek antiquity in the grouping of buildings ; it has thrown new light upon

the divine virtue of simplicity in art ; it has given us substantially the only examples of the practice of the Greeks in domestic and civic works ; and, in short, it seems to have brought nearer to our sympathies and comprehension that spirit which the conditions of modern architecture require as a corrective and purifying force."

But this need of the influence of the Greek spirit is not confined to the arts ; it is a general need in modern life. For while a certain similarity may be noted between the prevailing intellectual dispositions of the Greeks and those most characteristic of the highest modern civilization, the difference in the sum and objects of their intellectual life and our own is still more obvious. During the brief span of their history, their steady mental progress more than kept pace with the advance of their material welfare. It is a spectacle well fitted to excite greater and greater admiration as the world grows older, to behold a race, emerging out of the mists of antiquity, in the course of a few hundred years not merely open every path of civilization along which man has since advanced, but also leave along each road monuments of such excellence in conception and in execution as has made them models for all succeeding time. If this had been due to purely exceptional circumstances and conditions, the example of the Greeks might serve for little more than to excite barren wonder ; but, however much of their pre-eminence may be ascribed to peculiar gifts of nature or felicities of fortune, the closer it is examined the more clearly does it appear

to be the result of the even balance, fair proportion, and healthy development of qualities common to civilized man; while, in their turn, this balance, proportion, and development are seen to be mainly due to the exercise of a persistent will, under the guidance of strong moral convictions. In other words the superiority of the Greeks had its source in their moral discipline, was the result of adherence to principles of universal application and validity, and is therefore of perpetual service, alike as an example for emulation and as a criterion of conduct.

The fine organization of the Greek, the keen accuracy of his perceptions, the delicacy and depth of his sensibility, the clearness of his intelligence, the capacity of his reason, and the truth of his imagination, all had their origin and support in the soundness and strength of his moral disposition. His achievements were the fruit of self-discipline, temperance, moderation, respect for proportion. The beauty and simplicity of his art are the natural expression and the visible proof of these qualities.

It is perhaps the highest distinction of the Greeks, that they recognized the indissoluble connection of beauty and goodness. Plato gives to the doctrine its most poetic expression, but it was embodied in the common terms of the popular language. And the history of the progress, culmination, and decline of the fine arts, in which the Greeks embodied their conceptions of beauty, is, therefore, much more than the

mere history of the gradual refining of ideals till they attain a character of perfection beyond that which they have elsewhere acquired, and then of their rapid deterioration and disappearance; it is also, by the necessity of the case, the history of the steady moral education and improvement of the race by strenuous effort, continued through successive generations, succeeded by the exhaustion of energy through overstrained exertion, and by consequent feebleness and inability to maintain the elevation that had been reached, and to resist the demoralizing influence of a tragic series of national calamities. The best work of the Greeks still remains the best that men have accomplished, and, in spite of the brief term of their glory, their precepts and example are still, as was said nearly three hundred years ago, "the approved canons to direct the mind that endeavoreth virtue."

Thus it is that the Greeks are always modern, and contemporary as no other historic people are. To gain more exact and complete knowledge of them is matter of practical concern for the actual generation. However much the world advances, their teaching does not grow antiquated, and what Plutarch in his day said of the works of the Athenians is true now as then: "There is such a new bloom on these works, always preserving the look of something untouched by time, as if they had some perennial spirit and undying vitality mingled in them."

And yet, in fact, time has laid his hand heavily on

Greece, utterly destroying much, defacing, ruining, and concealing much more. It is the main object of classical archæology to recover and restore whatever may be rescued of the fragments. The methods of archæological investigation are constantly becoming more thorough and intelligent. They have passed the empirical stage, and archæology may now claim its place among the exact sciences. It is not by the brilliant, haphazard discoveries of speculative excavators that its progress is secured, but by carefully considered and deliberately executed investigations. The results of the Assos expedition show what may be accomplished, with comparatively small means, by rightly directed efforts, and afford ample encouragement for further undertakings of a similar nature. The opportunities for such work are indeed so numerous and so interesting, that the members of the Institute cannot but regret that its regular income is still too small to permit your Committee to recommend for the present any new expedition. Its means must be husbanded to meet the expense of publication of the report of work already accomplished.

This condition of things is not creditable to the intelligence of the country. There is no field from the cultivation of which greater advantage to the higher education is more certain to proceed, none in which the best interests of learning are more engaged, none in which more honorable reputation is to be gained. The mode in which the continued activity

of the Institute may be best secured and its strength be increased has engaged the attention of your Committee, and they hope to be able to present to you a carefully devised project for the attainment of this object.

The Report of the Chairman of the Committee on the School of Classical Studies at Athens, appended to the present Report, shows that the School is fulfilling reasonable expectations. It cannot, however, be regarded as solidly established, until it has secured a foundation sufficient to provide the means for the payment of the salary of a permanent resident Director at Athens, of which the importance has been urged by Professor Goodwin in his recently published Address, and is again set forth in the Report just referred to. For this position a scholar skilled in Archæology is required, competent to advance the science by original contributions, and to maintain the position of the School in this respect on a level with that of the other similar schools at Athens.

The Inscriptions of Assos, edited by Dr. Sterrett, are now in press, and will be soon issued as the first in the series of Papers of the School.

An essay upon Prehistoric Walls in Italy and Greece, with illustrations from photographs, by Mr. W. J. Stillman, in which he endeavors to establish by the evidence of these walls the course of Pelasgic migration, is now nearly ready for distribution to the members of the Institute.

WHILE the work in Classical Archæology has thus been effectively prosecuted during the past year, the work of the Institute in the field of American antiquity has made no inconsiderable progress. Here, however, the results are not concentrated at a single site, and the interest attaching to them is of a different order.

In the January Bulletin of last year Mr. Bandelier, after giving a full report of his previous summer's work, stated that he proposed on his next trip "to explore those regions east of the Rio Grande inhabited formerly by the Jumanos, — the districts of Abo, Cuaray, and Gran Quivira." Before starting, however, he made a ten days' excursion to Las Vegas, in November, 1882, hoping to determine the easterly limits of sedentary occupation in New Mexico. In that neighborhood he discovered the sites of five villages, all of the "small house" variety, whose pottery was both corrugated and plain, painted black on a white ground. South of this, in the Pecos valley, seven ruins were found, four of which were surveyed and partly photographed. These were all of the "large house" variety, but with pottery resembling that of the small houses, and varying essentially from the glossy pottery of the great Pecos pueblo. From all the information he could obtain, he concludes that the line of easterly occupation runs from Chaparita, on the Rio

Gallinas, twenty miles southeast of Las Vegas, southerly to the boundary of Texas at an average distance of thirty to fifty miles west of the river Pecos. This proves that the sedentary tribes at one time ranged over fully three fourths of New Mexico. But before the coming of the Spaniards, they had been pushed back by the fierce roving tribes towards the Rio Grande.

Returning to Santa Fé, he started Dec. 18, 1882, and after travelling one hundred and twenty-one miles south he reached Manzano, and thence southeast forty miles, Quivira. Including his return journey and the excursion to Abo, he travelled two hundred and ninety-three miles on horseback, and thirty-five miles on foot, in severely cold and stormy weather, and in snow nearly a foot deep. Such energy deserves recognition.

Topographical conditions, and the water supply resulting therefrom, have determined the position of a line of aboriginal settlements extending southward from Santa Fé, where such remains have been found, at about an equal distance from the Rio Grande and the line of extreme easterly occupation already indicated. The first group consists of two pueblos in the Arroyo Hondo, five miles south of Santa Fé, while six miles to the southwest is the Pueblo Quemado. Then as far as Larmy, eighteen miles south, there are vestiges of "small house" settlements; and six miles south of Larmy, at Galisteo, is a group of four ruins

belonging to the Tanos, one of which Mr. Bandelier surveyed. From here, avoiding the desolate, waterless plain, he turned westward into a mountain pass, and found two small pueblos, and continuing his journey he came upon and measured the memorable ruins of San Pedro, where, in 1581, the Tiguas murdered Fray Juan de Santa Maria. He then turned in an easterly direction over the Pass of Carnoel, 8,500 feet high, where the snow was lying three feet deep, and reached the skirts of the great alkaline marshes. Here he found the ruins of the Pueblo of Chilili, which was occupied till 1680, when the Apaches drove the Tigua inhabitants to seek protection with their kinsmen dwelling on the Rio Grande. Next came the Tegique Pueblo, and the remains of "small houses" at Manzano, where are still to be seen the old apple-trees planted by the Franciscans two centuries and more ago. To the southwest of the great Salines lie the ruins of Cuaray (or Quarra), of which a plan was secured. Thus far over the whole region "small houses," with their characteristic pottery, are scattered in abundance, though they are always in a much more ruinous condition than the pueblos.

But besides the Tiguas another sedentary stock—the Piros—had penetrated to the Salines from the southwest, from their homes on the Rio Grande near Socorro. Their progress can be traced by a line of ruined pueblos stretching along the western side of a lofty, uninhabited, and waterless table-land, still known

by the name of the Mesa de los Jumanos, and up into the beautiful valley of Abo. But Mr. Bandelier's route brought him from the opposite direction to the ruins at Abo, among which are those of a church erected by the Franciscans. Here he spent the last three days of December under very great difficulties, owing to the inclemency of the weather, studying the remains lying upon both sides of the dry Arroyo del Empedrado. Returning to Quarra, he crossed over a rolling tract of waterless sand, thirty-five miles wide, lying in a broad depression, called the Médano, and came to Gran Quivira. On this journey the abundance of snow made up for the absence of water. At Quivira, besides the mounds that remain to represent the many-storied pueblos, the ruins of two churches are to be seen, one of them quite large and handsome, and also a monastery.¹ The extent of these remains accounts for the stories current about the extraordinary size of the place, and the belief in the stores of gold and silver that lie hidden there, while the total absence of running water has always excited the amazement of visitors. Mr. Bandelier found the remains of four large, well-built water-tanks

¹ Mr. Bandelier's Report upon the Pueblo of Pecos has, upon page 30, a note containing a description of the ruins of Gran Quivira. There can also be found in the Smithsonian Report for 1854, p. 296, a very interesting account of the expedition made by Major Carleton in the winter of 1853 to the ruins of Abo, Quarra, and Gran Quivira. The season corresponded with that of Mr. Bandelier's journey, and the same severity of weather was encountered. The Report contains a very full description of all the ruins, and careful studies of the topography of the country.

within a short distance of the pueblo, sufficient to contain a year's supply of water. This system of storing water was found to have existed at all the deserted pueblos of the Médano, and is still practised at the inhabited one of Acoma. While at Quivira the horses of Mr. Bandelier and his companion were lost, and he was obliged to return on foot thirty-five miles to Manzano. After a second visit of two days at the ruins of Abo he found it useless to contend further with the obstacles presented by the weather, and he was driven by the parish priest of Manzano forty miles to Belen, on the Rio Grande.

As the result of these explorations Mr. Bandelier concludes that the "small houses" of the region of Manzano, Quarra, and Abo were the dwellings of the sedentary tribe called the Jumanos, who were first met with by Espejo in 1583. They came in 1630 to Socorro to beg for missionaries, and in consequence the Mision de los Jumanos was founded at Quivira, where the Franciscans gathered into the pueblo also natives belonging to the Piro and the Tigua stock. After the rebellion of 1680 the Jumanos disappear, but have left their name to the Mesa. Their pottery is always of uniform character, and is of a quality superior to that of the pueblo Indians in general, but resembling that of Pecos and of southwestern Colorado. The form of the pueblos of this region differs from the massive quadrangle peculiar to Pecos, Cochiti, and Colorado. The piazzas, or squares, are more

numerous and much smaller, often appearing like narrow streets with small houses irregularly crowded together, and resembling a modern pueblo.

From Belen Mr. Bandelier visited the inhabited pueblo of Isleta, the proper name of which is Tshya-ui-pa. The inhabitants speak the Tigua idiom, and it is believed by him to represent the "Tutahaco" of Coronado. The village is divided into four quarters of localized kins, or clans, which call themselves, respectively, the white, red, blue, and yellow corn. For dances and religious practices they divide themselves into two phratries, the "red eyes" and the "black eyes." Their social and religious organization resembles that of the Jumez in all points, with the exception that the gentes are localized. This is not the case in any other existing pueblo, although it was the custom in the ancient pueblos of Mexico. At Isleta the family house of the Spanish-Mexican type has supplanted the many-storied communal building. The names of the gentes of the corn people are common also among the Queres and the Zuñis.

The Rio Grande valley in this region has become quite denuded of trees, owing to cultivation; but although the climate is dry, the soil is quite fertile when irrigated.

From this point Mr. Bandelier rode fifty miles up the valley of the Puerco, visiting *en route* some small ruins near the village of Los Cerros, in order to settle the connection, if any, between them and the cele-

brated ruins — the Pueblo Bonito and Pueblo Hungo Pavié — in the Cañon de Chaco, which lies at the source of the Rio Puerco. There was no resemblance in the pottery, but it was identical with that of the Cañon de Chelle in Northeastern Arizona, and quite like that of Galisteo.

At Laguna Mr. Bandelier was able, through the presence and assistance of some Americans who have become naturalized there, to occupy his time advantageously in studying the religious organization of the people. They are a mixture of Queres and Zuñis, and are divided into nineteen different clans. Each clan worships an idol representing in conventional form the animal from which it derives its name, such as the wolf, the snake, the coyote; but although these animals may become the abode of the souls of deceased persons, the belief that the clan has sprung from them does not appear to exist. Besides the deity of the gens, the sun, the earth, and the air are worshipped as their principal gods. The element of the atmosphere, combining air, wind, and rain, was personified as the God of War. Formerly each clan had its own estufa; now several use the same. Each pueblo is divided into two phratries, which have become practically political parties, — one progressive, the other conservative.

From Laguna Mr. Bandelier went to Zuñi, where he spent a fortnight, during which Mr. F. W. Cushing, in the most friendly and generous manner, gave

him the benefit of his investigations into the principles upon which aboriginal belief and worship are based. For this kindness Mr. Bandelier expresses the warmest gratitude; and he does not hesitate to accord to these discoveries an importance for American ethnology not unequal to the results of the late Mr. Morgan's investigations.

Among the Zuñi, as well as the pueblo Indians of the Rio Grande, the unit of society is the clan, with descent in the female line, and inheritance in the same direction of everything except lands. But the place of the phratry has been taken by a more complex grouping into four clusters within the thirteen clans. These are secret societies, or guilds, based not upon descent, but on individual fitness for perpetuating certain special kinds of knowledge. The Medicine-order preserves the secrets of knowledge for healing the sick; the Hunters, those for procuring game; the Keepers-of-the-faith have charge of the worship of the deities, both public and secret; while the order of the Bow is devoted to the military art. Starting with a few simple acquirements, a complicated ritual, with a symbolical regalia, has gradually been developed. The basis of religious belief is a system of dualism, resembling that of ancient Mexico, according to which a pair, with the attributes of sex, have created the world and mankind, and continue to uphold all life; while the host of supernatural agencies worshipped are all created beings, forming a series of

deities organized after the fashion of the various groups of their own tribe. Each order has its own history in the shape of myths and fables, folk-lore and traditions; and thus have been preserved what recollections of the past are still in existence. These tales appear to establish the fact that at some remote time their home has been shifted from some point in the northwest, about the boundary of Utah, to their present location. The site claimed as their original seat, and the stations occupied by them in their migrations, are known to Mr. Cushing largely through personal inspection. Their traditions resemble those of the Queres, in claiming that after descending from the northwest they turned northward and settled on the Rio Mancos, from which place they migrated to their present home. This spot on the Mancos is called by them Shi-pap-ulima, and the Queres point to the same region as their former home, and call it Shipap; in the mythology of both tribes it is a sacred spot.¹

Mr. Cushing has already made known the fact that the Zuñis have preserved the tradition of the visit of Fray Marcos de Nizza, and of the slaying of Stephen, whom they call "the black Mexican;" and he has since discovered that they have also handed down the story, not only of the coming of Coronado, but even of Cabeza de Vaca. They claim

¹ The Rio Mancos is one of the smaller tributaries of the Rio San Juan, a branch of the Colorado. There, in the extreme southwestern corner of Colorado, have been discovered the remarkable "cliff dwellings" described and figured by Mr. Holmes in the Report of the Hayden Survey for 1876.

to have once inhabited the "small houses," whose ruins are so abundant in this region, and to have manufactured the kind of pottery characteristic of them, as well as to have built the ruined quadrilateral watch-towers, resembling those in use to-day. Their traditions also attach to certain abandoned structures belonging to the "large house" type. Seven of these, well built of stone, and at least two stories in height, Mr. Bandelier has measured and explored superficially. Three of them were inhabited at the time of Coronado's visit in 1540, and formed a part of the famous "Seven Cities of Cibola;" and tradition points to the one called by the name of Quaquima as the scene of the slaying of the negro Stephen. Two belong to that cluster of six which was built on the top of the lofty, steep, and almost inaccessible mesa after the uprising of 1680, and abandoned after 1704. Finally, two are the ruins of pueblos abandoned previous to the discovery of the country in the sixteenth century. They are irregular polygons of the common shape, sometimes called round, with one or two small entrances, of which the best known representative is the Pueblo Bonito in the Cañon de Chaco.¹ This polygonal form, though frequent in Arizona, is not found east of the Rio Puerco; but the inference is plain that a difference of form does not indicate a different origin. The older

¹ An engraving of this, with a restoration by Mr. W. H. Jackson, is given in connection with Mr. Morgan's "Study of the Houses of the American Aborigines," in the first annual report of the Archæological Institute.

the ruin, the better is the pottery found with it ; but it is to be noted that the Zuñis say that some of the ruins belong to a people of whom they know nothing, and the same story is told by the pueblo Indians of the Rio Grande. Neither do the Zuñis claim to have ever penetrated to the river Gila to the south, although there is an almost unbroken belt of ruins extending thither.

As the conclusion of his architectural studies, Mr. Bandelier finds a well-defined system of growth from the temporary Indian lodge to the pueblo house of to-day. The winter houses of the northern tribes, with their chimneys, are paralleled in everything but material by the "small houses" of New Mexico and Arizona. Among the tribe called Hava-supay, cognates of the Moquis, dwelling in the cañons of the Colorado, the house built of wood and mud is a permanent home, and no longer only a winter dwelling. As wood disappears, adobe construction takes its place for the "small houses;" and from this to the many-storied pueblo building there exists an unbroken chain of types, so that the highest form of construction is thus proved to be not an exotic, but the result of natural growth. The area occupied by the former abodes of the sedentary Indians is limited on the east to the region lying forty miles west of the river Pecos in New Mexico, and extending westwardly to within about one hundred miles of the Colorado, while to the north it stretched nearly to the fortieth degree of latitude. As

for its southern limit, we know that at the time of their discovery all the ruins of stone or adobe in Central and Southern Arizona, and in the southwestern part of New Mexico, and as far down the Rio Grande as San Marcial, had been abandoned prior to the coming of the Spaniards. The general distribution of these ancient remains is indicated by that of the permanent water-courses, with their timber and cultivable soil; while the particular location is frequently determined by strength of position. In prosecuting his study of these ruins, Mr. Bandelier came fifteen miles southwest from Zuñi, at Aguas Calientes, to the one called Ha-ui-ca (the Aguico or Havico of the early chronicles), the largest of the Cibola group; and ten miles farther on, to a second.

After a long and desolate ride he struck the Little Colorado at San Juan, and, following its upper course to the Cañon del Tule, he found the remains of ancient artificial water-courses, lined with a hard coating of concrete, which effervesced strongly in acid. Here, besides pueblos, the remains of "small houses" were numerous, and exhibited a feature which became more noticeable farther south,—that is, an enclosure like a courtyard, of which the house proper occupied an angle. Leaving on one side the valley in which Springerville is situated, where similar remains are to be found, he crossed to Cooley's on the little Rio Show-Low, at the edge of the heavy forest, where, at an altitude of 6,100 feet, are the

ruins of an extensive stone pueblo built in the shape of an L. From this point up to Fort Apache is mostly an uninhabited timber-land; but in the vicinity of the fort he surveyed four ruins, representing both compact houses built of sandstone and detached ones constructed of lava. To the northwest of the fort were the remains of the largest village found in Arizona, and of this Mr. Bandelier obtained a ground-plan.

Crossing the Apache reservation with an escort of two soldiers, kindly furnished by the commanding officer, Captain Dougherty, and finding no ruins on the way, he came to the upper waters of the Gila. This river flows nearly due east and west for a course almost as long as that of the Rio Grande, and in its sheltered valley, protected from the cold north winds, where scarcely any snow falls in winter, the aspect of nature assumes a character almost sub-tropical. Here, within a distance of thirty-five miles, from Fort Thomas to San Carlos, besides the well-known ruins of the Pueblo Viejo, which were examined, the sites of four villages were located, and ground-plans obtained of four others. They were composed of a number of small buildings, similar to those of New Mexico, but having courtyards connected as at Tule. Though the separate houses were small, the rooms in each were larger than those of the compact pueblo and of the "small house" farther north. In some places a large, well-defined mound stands amid the ruins. This

seems to have been the normal style of habitation in peaceful times; but in adjacent cañons are found numerous "cliff dwellings," which were apparently used as places of refuge. The pottery was not of the best quality, but principally of the ordinary variety with black, geometrical ornamentation upon a red or a white ground. Metates, or grinding-slabs, and pestles, made of lava, were common, and stone axes, made of a compact, dark-green rock. Their shape was different from those found farther north. They are long, thin, and slender, with one side always flat or convex along the entire length; and the groove for fastening the handle does not run around all four sides. The villages were not located upon the river-bottom proper, but on a terrace of drift somewhat elevated, and rendered capable of cultivation by irrigation. The ditches for this purpose are common along the course of the valley, sometimes running for miles parallel with the river, and sometimes leading directly down to it from the interior, appearing like the outlet of a creek which has since dried up.

From the Gila valley Mr. Bandelier then travelled northwest, by the copper mines at Globe, over the Sierra Pinal, to the valley of the Salado, thirty-five miles distant. Aboriginal ruins of the same character as those last described are found at a few miles from each other for half the distance; but no proof could be obtained that the natives ever attempted to work the mine of native copper that occurs here. Near

McIntosh's Ranch are two remarkable cave-dwellings, three stories high in front, and descending in terraces into the interior of the cave, precisely resembling the well-known examples of similar structures in Colorado and New Mexico. They are on a steep slope, four hundred feet above a creek, and are almost inaccessible because of the crumbling nature of the rock and the thickets of cactus that clothe it. The buildings are the characteristic pueblo house, placed inside a natural recess, and from their sheltered position are remarkably well preserved, although it is plain that they were built in a hasty and slovenly fashion. In them have been found metates of granite, baskets, sandals and ropes made of yucca fibre, corn, beans, cotton, and cotton cloth, and two copper objects, fashioned by hammering, one of which was a small rattle.

From the Salado River, up Tonto Creek to Old Fort Reno, is a distance of twenty-four miles, in which eight villages were surveyed and five more located. Throughout the whole Tonto Basin, for a hundred miles north to Fort Verde, east of Prescott, ruins of all descriptions abound; but it was found to be impracticable to examine them for lack of time. At Old Fort Reno a new architectural feature makes its appearance, — a raised platform, on which the remains of buildings are supported. From this point, crossing the Mazatzal Range, Mr. Bandelier struck the Rio Verde at Fort McDowell, where he remained from the 2d to the 14th of June, during

which time he surveyed five villages of a character similar to those already noticed. The pottery, however, was of an entirely different quality, quite like that manufactured by the natives at the present time. The settlements of the sedentary tribes in this region seem to be principally clustered in the valley of the Rio Verde, and in the triangle formed by the lower course of the Salado River, the Gila, and Superstition Mountain, which is called "the open plain" or "the desert." This is a warm region, with a scanty rainfall and but little timber; but the soil is very fertile when irrigated, and two crops a year can readily be raised. Mr. Bandelier regards it as exceedingly well adapted to the wants of a horticultural people, and even traces in it some resemblance to Lower Egypt. The principal ruins are scattered along the southern bank of the Gila, at an average distance of two miles from it, and from three to six miles apart, from above Florence to beyond Maricopa, a distance of sixty miles. Here he surveyed five villages, and located two more on the southern, and two on the northern side, — among them the celebrated one called the "Casa Grande."

In this region, and up the Gila as far as Tucson, dwell the Pimas, the Maricopas (a branch of the Yumas), and the Papagoes. These are all recognized as pueblo Indians by the Zuñis and the people of Cochití. Their villages consist of small round houses, with solid earthen roofs, each occupied by a single family as a winter house; their summer house

is a mere shed, and they have, besides, square store-houses with earthen roofs. In thus making use of three separate houses they resemble the Mexican Indians, as well as those of the pueblos of the North. They are divided into several clans, which are not localized, and their descent now is in the male line, though the name by which members of the same clan designate each other — “offspring of two sisters” — shows that formerly descent in the female line prevailed. Each village has its council-house, its elective chief, and its public crier. They have also their secret orders, holding their meetings in very secluded spots. The method of irrigation practised by them serves to explain the use of the artificial water-courses found near some of the ruins, running from the interior down to the river-bottoms. It is their custom to connect the mountain gulches with irrigating ditches, and by dams, properly located, to collect, guide, and distribute over the fields the water which pours down these natural water-courses in the daily thunder-storms during the rainy season. The Pima pottery is good, and their basket-work is of superior beauty and quality, but at present they do not practise weaving; their industrial arts show that they have formerly reached a higher stage of development. Physically they are tall and fair, and their habits are peaceable; but they have proved themselves redoubtable warriors against the Apaches, armed with only their bows and arrows, as their bow is the longer. For information in regard

to the organization and inner life of the Pimas, among whom he was able to spend only about a month, Mr. Bandelier expresses his deep obligation to Mr. J. D. Walker, of Casa Grande, who speaks their language perfectly, and has secured their entire confidence. This gentleman, who has become thoroughly versed in all their myths and traditions, has arrived at the same conclusion reached by Mr. Bandelier at Cochití, and by Mr. Cushing at Zuñi, that there is not the slightest foundation for the Montezuma story in authentic aboriginal mythology.

At Picacho station, forty-six miles northwest of Tucson, after seven months and eighteen days' constant work in the field, Mr. Bandelier was compelled, by the dilapidated condition of his saddle, to abandon, with regret, his faithful horse, and to take to the railroad. During all this long period, not only was he constantly subjected to toil and hunger, and perils of travel "by flood and field," but, as will be well remembered by members of the Institute, at one time his life was supposed to be in imminent danger from hostile Apaches. The Executive Committee feel that Mr. Bandelier is deserving of the highest praise for his courage, fidelity, and hardihood; and when to these moral qualities we find joined an unequalled knowledge of the sources of Spanish-American history, both in print and manuscript, a trained judgment and great experience in archæology, we feel that the Institute is indeed to be congratulated in the pos-

session of an agent of the highest qualifications for conducting its explorations in our own country.

Upon his return home Mr. Bandelier prepared the Report upon his investigations during the year 1883, which is appended to the present Report of the Executive Committee.

Late in November, 1883, Mr. Bandelier started a second time, and proceeded as far as El Paso del Norte, on the Mexican frontier, where he was received as a brother by the so-called Mansos, or Mild, Indians. They are a sedentary tribe, who, previous to the coming of the Spaniards, had changed their former solid mode of building for habitations constructed of reeds and wood. Their mode of government and system of kinship was found to be the same as that of the northern pueblo Indians, from whom their rites and traditions clearly prove them to have come. They are divided into six clans,—the blue, white, yellow, red, and black corn, and the blue river. Their traditions speak of other pueblo stocks which have preceded them in their wanderings southward into regions unknown. Besides the Mansos, there are living at El Paso two northern pueblo tribes, who were transported thither by Otermin in 1681,—the Piros and the Tiguas. The former claim to have come from Abo; the latter from Chilili, Tegique, Cuarry, and Manzano,—all of which places are in the region of Gran Quivira.

On returning to Santa Fé Mr. Bandelier made a

visit to San Juan, among the Indians of the Tehua stock, from whom valuable historical information was secured. The basin of Galisteo, with its ruined villages, is said to have been once occupied by a tribe called the Tanos, and these Mr. Bandelier ascertained to have been properly Tehuas. All of the eleven pueblos of the Tehuas which submitted to Oñate in 1598 he has succeeded in locating, — ten of them on the west bank of the Rio Grande, with San Juan on the east. Only Santa Clara, San Ildefonso, and San Juan are still inhabited.

Such explorations as it has been possible to accomplish during the present year will be found to be embraced in a second Report from Mr. Bandelier, appended hereto.

Subsequently he left Fort Lowell, and after a dreary ride of two days reached Tres Alamos, on the San Pedro River. From this point he learned that the ruins extend both up and down the river. As its head-waters lie inside of a water-shed, from which two streams flow into the Gila, and two into the Gulf of California, it is an important region. It is Mr. Bandelier's intention to proceed southward into Mexico, up the San Pedro valley, and to cross over from there to the valley of the Sonora. Our last information from him leaves him on March 9 at Banamichi, one hundred and forty miles from the source of the Sonora, from which place he purposes to travel still farther south, and then cross the moun-

tains to the basin of the Rio Yaqui. Following up this river very near to its source, he intends to cross the Sierra Madre to Casas Grandes, in Chihuahua, and examine the celebrated ruins at that place. Thence he will follow the eastern slope of the Sierra, and we trust to have the next tidings from him at Fort Cummings in New Mexico.

The Report by Mr. Bandelier of his tour in Mexico, in 1881, with its exceedingly interesting accounts of the Pyramids at Cholula, and of the famous remains at Mitla, is now nearly ready for publication. It will probably be distributed to the members of the Institute before the middle of the summer.

A statement of the Receipts and Expenditures of the Institute from May 1, 1883, to May 1, 1884, will be found on the next page.

CHARLES ELIOT NORTON, *President.*

MARTIN BRIMMER, *Vice-President.*

FRANCIS PARKMAN.

WILLIAM W. GOODWIN.

HENRY W. HAYNES.

ALEXANDER AGASSIZ.

STEPHEN SALISBURY, JR.

HENRY L. HIGGINSON, *Treasurer.*

EDWARD H. GREENLEAF, *Secretary.*

EXECUTIVE COMMITTEE.

Receipts and Expenditures, May 1st, 1883, to May 1st, 1884.

DR.

To salary and expenses, A. F. Bandelier . . .	\$1,850.41	
“ printing second edition Pecos Report . . .	124.12	
		<u>\$1,974.53</u>
“ salary, J. T. Clarke	1,200.00	
“ “ “ (May 1st, 1884, to November 1st, 1884, paid in ad- vance)	600.00	
“ expenses of Assos Expedition, including salary of F. H. Bacon and R. Kolde- weij	1,067.75	
“ photographic apparatus for Assos	182.92	
		<u>3,050.67</u>
“ printing Fourth Annual Report		125.32
“ printing a portion of Mr. Bandelier's Re- port of his Tour in Mexico in 1881		250.46
“ sundry expenses, advertising, printing, postage, salary of Secretary, and all other expenses		761.70
“ balance to 1884-85		<u>1,162.51</u>
		<u>\$7,325.19</u>

CR.

By balance from year 1883-84		\$154.02
“ Annual Subscriptions		1,835.00
“ Life-Membership Subscriptions		300.00
“ donations for American work	\$1,000.00	
“ donations for printing American Report . .	325.00	
		<u>\$1,325.00</u>
“ donations for Assos work	300.00	
“ donations for printing Assos Report . . .	600.00	
		<u>900.00</u>
“ donations for unspecified work		2,680.00
“ received from sale of Reports		93.61
“ interest		37.56
		<u>\$7,325.19</u>

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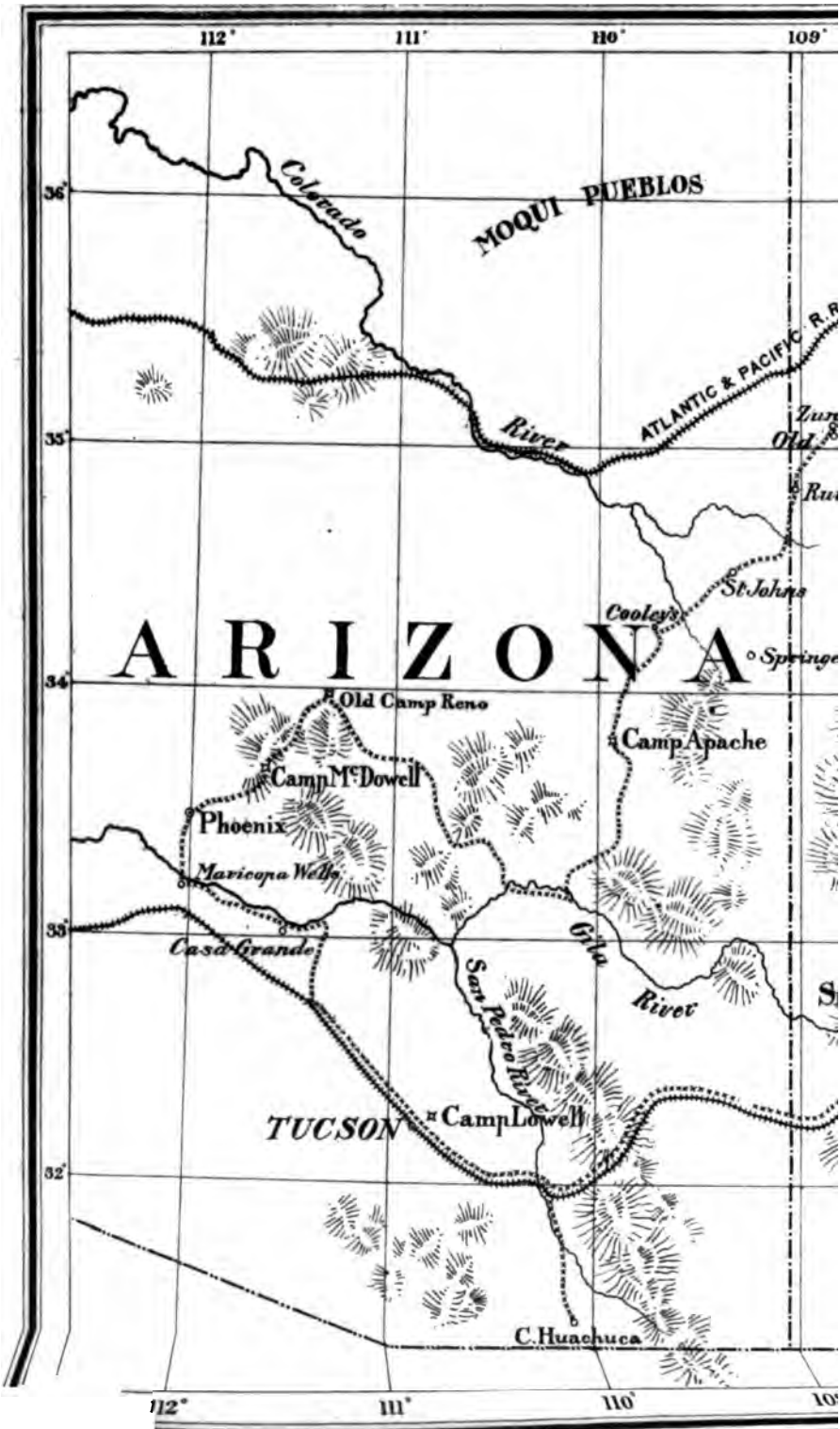
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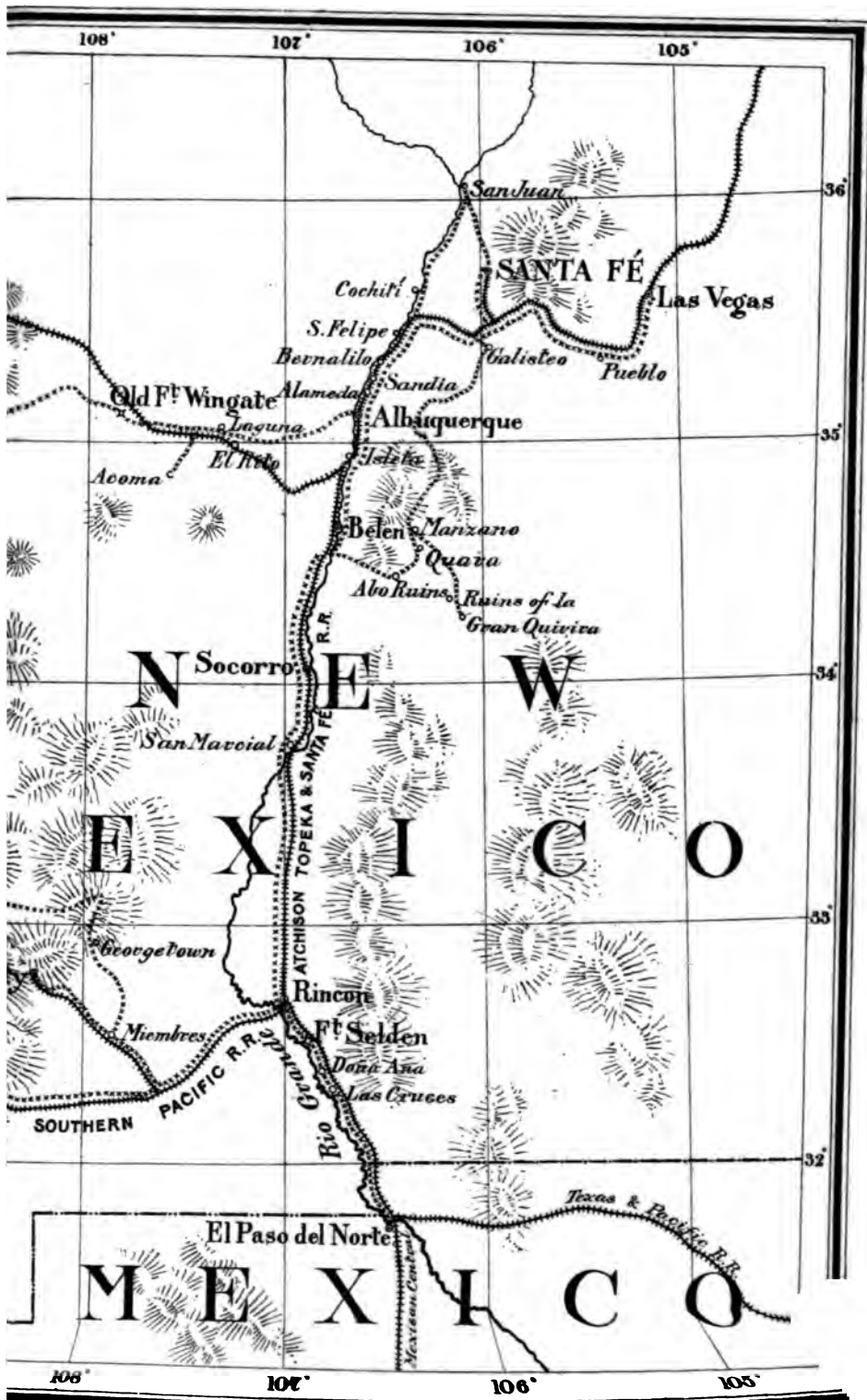
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APPENDIX.

REPORTS BY A. F. BANDELIER

ON HIS INVESTIGATIONS IN NEW MEXICO DURING THE
YEARS 1883-84.

I.

HIGHLAND, ILL., August 11, 1883.

To the President of the Archæological Institute of America:

SIR, — Over the portions of New Mexico and Arizona which I have visited in this year's trip, as well as in preceding years, I have noted ruins of the following character: —

I. Large communal houses, several stories high, of which type there are the following varieties: —

a. One or two, seldom three, extensive buildings, composing the village. These structures are so disposed as in most cases to surround an interior court. These pueblos are common along the Rio Grande as far south as San Marcial; they are found east of it on the Upper Pecos, on the Santa Fé plain, between the Sierra de Sandia and the ranges of San Francisco and of San Pedro. To the north they prevail, according to the statements of Messrs. Jackson and Holmes and of Mr. Morgan, through Southwestern Colorado and Southeastern Utah. In the west they occupy the Cañon de Chaco, and the regions about Acoma and Laguna, in New Mexico. In Arizona they seem to range from the Moqui region to Fort Apache.

b. Polygonal pueblos. These occur in the Cañon de Chaco, forming one house of many stories. They are, however, most abundant about Zufi, where two of them, Nutria and Pescado, are still inhabited. Some are found as far west as the outskirts of the Moqui; and in the east they reach Acoma, and extend as far south as the Cebollita.

c. Scattered pueblos, composed of a number of large, many-storied houses, disposed in a more or less irregular manner. In one instance a village was originally composed of as many as eighteen edifices. They are either in irregular squares or on a line, as at Quivira. This variety prevails largely in the basin of Galisteo, about the Salines and the Mesa Jumana, east of the Rio Grande; and I have found isolated instances of it near Acoma, Zufi, and also at Fort Apache.

d. Artificial caves, resembling in number, size, and disposition of the cells, the many-storied communal dwelling. They are found especially on the west bank of the Rio Grande, from Santa Clara to Cochiti, excavated in the soft volcanic ash and pumice-stone rocks prevailing in these regions.

e. Many-storied dwellings with artificial walls erected inside of natural caves of great size. It is evident that the occurrence of such structures depends exclusively upon natural formations, which are necessarily local geological features. While therefore these cave-dwellings occur mainly in Eastern Arizona and Western New Mexico, it is of importance to note that they are found far down into Southern Arizona, among a class of ruins otherwise totally different.

These five classes of buildings have certain leading features in common, which induce me to assign them to the same general type.

In the first place, each separate building consisted of an agglomeration of a great number of small cells, without any larger halls of particularly striking dimensions. Every-

thing in the structure appears to have been on the same footing.

All the buildings were at least two stories in height, except in the case of outhouses or additions. The lower story had in such cases no entrance from the front, its roof was ascended by a ladder, and from the roof the interior was reached through trap-doors. This arrangement sometimes obtained as high as the upper stories; but in most cases the second story had front doorways, and the tiers above were reached by stone steps from the outside.

The various stories or floors of the house receded from the bottom to the top, — sometimes towards one side alone, with the other rising in an unbroken wall; sometimes on both sides, like two staircases leaning against each other.

The second feature is the prevalence of the *estufa*. This original "place of reunion," or of "abode" for men only, was not always circular, and depressed below the ground. In many localities it would have been impossible to excavate it, since the pueblo rested on the solid rock. The still inhabited villages of Acoma, Laguna, Gualpi, etc., afford an illustration of this. The absence of circular depressions in a communal-house ruin is not therefore evidence that the *estufa* did not exist. Wherever it was practicable, the round hall was introduced; and we find it in all the five varieties of the architecture of the communal-house village. Circular rooms are found, built *on* the rocky shelf, in the caves of Colorado; circular *depressions*, carefully walled in, at the Quivira, at the Mesita Redonda, and near McCarthy's station, sixteen miles from Acoma, — all ruins which come under the classes *c* and *e*. The polygonal pueblos (*b*) about Zuñi contain circular depressions of the *estufa* type; and the artificial caves at the Rito de los Frijoles have a few round rooms of strikingly large dimensions, which the Indians of Cochitl

point out as places for sacred rites. It is needless to speak of the depressed circular estufas among the one-house pueblos of the Chaco and of the Potrero Quemado, the two-house ruins of the Potrero de las Vacas and of Pecos, the three- and four-house quadrangles of the Potrero de San Miguel, of the Potrero Viejo, of San Pedro, Toreuna, and Puaray, of the Barro near Limitar by Socorro, and many others of class *a*. On the other hand, the actually inhabited pueblos of Zuñi, Acoma, and Laguna have their estufas built in among the assemblage of cells, without any distinction of shape, hardly of size, so that, should they be abandoned and reduced to ruin, it would be almost impossible to distinguish them from the rest of the cells. It would therefore be unwise to deny their existence in the very compact ruins of the Tule, Show-Low, and Fort Apache. Until further explorations, I must limit myself to the statement; therefore, that the estufa, as a feature, accompanies the communal-house village probably as far as it extends, but that the circular shape appears to be more common in the northern and eastern regions.

It may be well to state here, that, while there is hardly any variation in the size of the single room or cell in the different classes of the communal-house village, the average size of three hundred and fifty among the rooms measured, selected from eighteen ruins of every variety of construction and from all parts of the area circumscribed, is 3.5×3.7 metres. The average thickness of the walls in New Mexico, as well as in Arizona, as far as I have seen it, does not exceed 0.31 metre for the communal-house village type; but in the Cañon de Chaco and in Colorado they are much thicker. My collection of ground-plans of the communal-house type (exclusive of the ruins of Pecos) embraces thirteen specimens in Arizona and fifty-four in New Mexico. Not including the

estufas, I have found the largest rooms in the whole number to measure 3.5×8.0 metres, and this in a pueblo (Potrero Viejo, near Cochití) which is known to have been built after 1680, and abandoned in 1694. Among such ruins as clearly antedate the Spanish period, there was no room exceeding 4.2×6.5 metres, and there are but few of that size. In some instances where larger dimensions appear, the former existence of partition walls now obliterated by decay is probable.

In connection with this type of structures there appears a well known and often described feature, the watch-tower. It is very common in Colorado and Utah, and thence descends along the Continental Divide. I have thus far followed it only as far south as Fort Apache. It is either round or, as in the Zuñi region proper, rectangular. East of the Continental Divide there are fewer traces of it; still I noticed it on the east bank of the Rio Grande at Cochití, and also at Pecos. But I must add here, that, while it is easy to detect the watch-tower among ruins when it is round, a rectangular edifice of this kind may escape notice in many cases, or be taken for an outhouse, or even for a small-house ruin. It is therefore not certain that the watch-tower was more common in one section than in any other. Neither is the tower, as such, a strictly military edifice. Those about Zuñi, for instance, were used to guard the crops from depredations by wild beasts and by birds.

There is very great difference in regard to the care bestowed upon the building of the walls. The descriptions of the great ruins in the Cañon de Chaco show that considerable attention was paid to the laying of the stones, to their fracture and size. Similar care is evidenced by the walls of Quivira, far in the southeast. The ruins about Cochití, built of light volcanic rock, that easily breaks into prismatic blocks, are very well constructed. But in almost every section, nay,

in every group, there is an admixture of houses of slovenly build or fabrication. Similar irregularity is met with in the kind of materials used. The same tribe built of rock and mud in one place, of regular adobe in another. The Tiguas of Bernalillo dwelt in adobe houses, those of San Pedro and of Cuaray in stone buildings; and these pueblos were occupied contemporaneously. The Piros of Socorro dwelt on both banks of the Rio Grande, and one of their pueblos is of stone, while on the opposite shore there stands one of adobe; the Quivira is of white limestone, and Abo of dark red sandstone. Those who erected the houses made use of the materials which lay in closest proximity; and their greater or lesser achievements in details of architecture are due only to local causes and opportunities.

II. A second architectural type, even more prevalent, is that of detached family dwellings, either isolated or in groups forming villages.

This class of structures is found over the entire area described in the beginning of this Report. But little attention has been paid to them by other explorers as yet. I cannot therefore give any very precise details about regions which I have not visited myself. The descriptions given by Mr. W. H. Holmes mostly relate to so-called "cliff-houses;" and it is not quite clear from the statements of Dr. Jackson about the ruins of the "Hovenweep" in Utah, whether they are those of a small-house village proper, or not.

It is not so easy to divide this type into distinct varieties. The detached family house sometimes contains but one single room, but in most cases it includes several; indeed, on the east of the Continental Divide, it more frequently appears to have been the abode of several families.

Over the greatest part of the territory the house is built of stone. On the east side, however, of the Sierra Madre of New

Mexico, near Las Vegas, I found the buildings of mud or adobe, on rubble foundations; and the same material, or rather an analogous substance in the shape of a natural concrete, has been used over that large portion of Arizona beginning at the Upper Rio Verde and the Tonto Basin in the north, the Apache Reservation in the east, and extending westward to meridians 112 and 113, and south beyond the Rio Gila, as far as I have explored. Over this whole area the communal-house type is only represented by a few cave-dwellings promiscuously distributed.

Beginning with New Mexico, I found that on the east side of the Rio Grande the houses of the detached class were all much ruined. In five instances, however, I could measure rooms, and their average size was 4.7×4.4 metres. On the west side one hundred and thirty-four rooms from fifteen different localities give a mean of 3.6×3.5 metres. In Arizona, from the vicinity of Zuñi to Fort Apache, I surveyed ten groups, partly in fair condition, and out of seven of these secured a mean of 3.9×3.7 metres. On the Upper Gila, Salado, and Verde, twenty-four localities gave an average of 5.1×4.5 metres. On the Lower Salado I was unable to obtain measurements; but on the Lower Gila four rooms at the Casa Blanca give 5.1×3.8 metres, whereas the Casa Grande, with three stories still standing in part, shows ten rooms on two floors, six of which have an average interior dimension of 7.58×2.84 metres, while four measure on an average 2.86×12.0 metres. Aside from these extraordinarily large chambers which find a parallel only in some of the long family rooms in the pueblos of to-day (Zuñi, Acoma, 6×5 metres; Santo Domingo, 7.3×5.2 , 8.5×4.3 , 8.2×3.2 metres; Cochití, 11.2×4.7 metres), it results, from these figures:—

1. That on the area over which the family house occurs

alongside of the communal type, the average size of the room in the former (4.1×3.9 metres) exceeds the dimension in the latter.

2. That there is a gradual increase in the size of the rooms in detached buildings in a direction from north to south, which increase is most distinctly marked over the area where the detached house alone prevails.

Unlike the communal structure, the family habitation has front doorways ; and the holes for air and light are mostly larger than those of the former, so that in my preliminary report of last year (*Bulletin*, I. 28) I ventured to dignify them by the title of windows. As far as Fort Apache the buildings are not more than one story in height, and as far as San Juan, the circular depressed *estufa* is frequently, if not generally, connected with it.

Before treating of that variety of the detached house to which the ruins south and west from Fort Apache belong, I must state that there are ample indications of a transition between the former and the communal pueblo. As already stated (*Bulletin*, I. 28), the ruins at the Cebollita, near Acoma, appear like an intermediate form. Those at the Cerro Pelon near Abo, on the Mesa de las Padillas of Isleta, on the Cerros Mohines of the eastern Rio Puerco, and those near the railroad station of Fort Wingate, the village in the "Cunada bonita" of Zufi, all comprise houses having from ten to thirty-five rooms, and still not over one story high. But the majority have seldom more than eight to twelve apartments, frequently less.

As far as the Tule, the detached house usually stands alone, and there are no traces of courts or enclosures about it. At the Tule, courtyards make their appearance, and they continue towards Fort Apache. On the Upper Gila whole villages with enclosures are found ; and finally, around Globe,

their ground-plans become so perfect that it is easy thenceforward to trace their structure even in detail.

Not only are the single buildings connected with enclosures, but these enclosures themselves so meet each other, that the settlement forms a checker-board of irregularly alternating houses and courts. The houses are easily discernible from the fact of little rubbish-mounds having accumulated on their site, around which the foundations of rubble still appear, or in which parts of the walls are yet to be found. The courts sometimes appear not only as much larger spaces, but they are free from rubbish, and thus seem flat, or even depressed. These pueblos are thus virtually closed on all sides, either by the walls of a house or by those of yards; and they are very defensible, as there are but one or two entrances, and these either through a narrow passage between two buildings, or through a still narrower one, with re-entering angles, between two court walls. Each village contains one or more open spaces of large size; but they are irregularly located, the tendency being to cut up the whole plat into as many small squares as possible.

Besides small and low mounds, every village contained, if of any reasonable size, a larger and higher eminence, sometimes in the centre, sometimes towards one of the sides. This feature develops itself very prominently as soon as Upper Salt River is reached, and the lesser mounds decrease correspondingly.

On Tonto Creek there is a very striking kind of ruin, consisting of a high mound in the centre, enclosed by a broad quadrangular wall, while transverse walls connect this enclosure with the central hill. A few small buildings still cling to the inside of the circumvallation and of the inner courts, and the large eminence seems to have absorbed all the others. From this point this is the typical ruin, isolated houses of

course excepted, with only a difference in the number of small buildings and in the position of the mound, which sometimes stands on the side or in a corner of the whole cluster.

These mounds have been excavated, and in one of them copper implements have been found ; and they have revealed rooms with walls of stone and mud 0.45 to 0.60 metre thick. In a few instances, where layers of foliated gypsum are in convenient proximity, such walls consist of blocks of gypsum resting on rubble foundations ; in other words, the mounds have proved themselves to be ruined houses. There is, consequently, in the structures from Globe to the Lower Rio Salado, a tendency to agglomerate into a central house, surrounded by scattered buildings, and finally encompassed by a circumvallation for defence.

But this central building, into which in some cases all the dwellings have merged, cannot compare in size with the communal house. The largest mounds which I have measured show, along the well-defined lines of foundations, perimeters of 131.2 metres, in an L-shaped polygon with re-entering angles, and 99.1 metres in a narrow horseshoe ; the former is subdivided into twenty-nine, the latter into not more than twenty, apartments. The mounds are more striking by their height than by their extent. The greatest elevations observed were 2.25 and 3.30 metres. In the latter is included a distinct roof 0.60 metre thick, composed of earth on the usual framework of beams and cross-poles, overlaid by their layers of rock. There are indications that in some cases the house was erected on an artificial platform, as at Fort Reno ; and the amount of rubbish indicates that in several instances the structures were two stories high. These facts have a double bearing. In the first place, they show that the population of one village sought to live together in one building with comparatively large rooms ; and, secondly, they prove

beyond a doubt that even the largest village communities were small in population, — for the most extensive, counting one room to each family and adding a corresponding number for the few outlying structures, could not have sheltered three hundred people each.

It is impossible for me to determine at present the average size of the courtyards. But their purpose and object may be discussed. It is evident they were not for stock. Defence was one of their main ends ; but the Pima Indians, whose traditions are of considerable importance in the matter, state that in many cases they enclosed garden plots. This is partly confirmed by their appearance, though not always by their size. They may also have been the yard proper for each family, in which the latter slept, cooked, in fact lived, during the heat of the summer months. If such were the case, they would be strangely analogous, though on a smaller and ruder scale, to the buildings at Mitla.

From concurrent testimony I conclude that this is the character of the ruins of the Tonto Basin and of the Upper Verde River. It certainly prevails south of the Lower Gila as far as the Southern Pacific Railroad, with some not unimportant modifications.

Near Fort McDowell there occur low and extensive mounds in the neighborhood of an extensive tank. Similar ruins are scattered about the northern bank of the Lower Salado in the level desert. Of these I examined one cluster more particularly, — that three miles west of Tempe, on the road to Phœnix.

Within an area whose diagonal from southwest to northeast measures about one mile from Globe to the Verde, a number of groups similar in all points to those just described is promiscuously scattered. At least three of them have central mounds ; others are mere flat tracings of houses connected by

contiguous enclosures. On the southwest corner, however, stands a structure which deserves particular attention.

A quadrangular platform, about 1.5 metres high, and measuring longitudinally 104 metres, by 76.1 on the south, and 66.2 on the north, supports a mound, solid and wholly artificial, whose dimensions on the top are, respectively, 82.6, 41.4, 79.3, and 34.8 metres; the height is 3.2 metres on an average, and the slope is abrupt, but fairly regular. Along the rim of the lower platform are the vestiges of a thick wall; and the northwest corner terminates in a depressed area 17.9×5.0 and 8.4 metres, also marked by an enclosure, on whose eastern side two conical mounds arise, the taller of which is five metres high. Two more enclosures of stone skirt the inside of the wall, and a transverse wall connects the northern rim of the platform with the basis of the big mound. On the top of the latter there are at least seven mounds, two of which, conical in shape, are 1.6 and 1.7 metres high. They are connected with each other and with the edge of the raised surface by stone foundations, forming enclosures and yards. It is, on a larger scale, the disposition typical of Tonto Creek; but the whole area appears to have been twice artificially raised, first at the lower platform, and again as a high foundation for the central cluster, which in itself is a regular typical group or village.

Clefts and rents in the large mound have exposed its core in places. They leave no doubt as to its being solid and wholly artificial; while its relation to the adjoining groups, the pottery, and the nature of the buildings on its upper surface, clearly indicate that it was a part of the whole cluster, and formed, so to speak, its southwestern corner.

The Mexican settlement at Tempe, on the south side of the Salado, partly rests on mounds which, upon excavation, have proved to be decayed buildings. A very large ruin at

Mesa City was described to me as similar to the one which I explored. Still, a notable difference appears in these ruins on the south bank. The rubble-stone foundations disappear completely, and wherever there are traces of enclosures or courtyards, they form heaps of decayed marl. This feature holds good along the north bank of the Gila, opposite Sweet-water, and on the south bank from Casa Blanca to Florence. The whole open plain to the Southern Pacific Railroad, as well as the "Desert" between the Salado and Gila, show only crumbled marl and soil as the material used.

The friability of this substance is such that falling walls soon become heaps of fine white dirt. When this dirt accumulates it preserves any wall, so that the ruins at Casa Blanca and Florence reveal partitions inside of the hill of rubbish. Upon closer scrutiny this hill seems encompassed by a quadrangular line of low embankments, with lower shapeless mounds at the corners and elsewhere; while the central eminence shows traces of buried walls, and every rise of the whole group is covered with fragments of pottery.

Fortunately for explorers, there stands, in the very midst of these almost shapeless remains, the important ruin of the Casa Grande. Two miles south of the Gila River, its situation has nothing to distinguish it from other ruins; but some of its buildings are intact, and others enable us, in their ruined state, to explain the present condition of other places. In short, the Casa Grande shows every degree of decay, every kind of structure, which the ancient villages of that region exhibit.

As the name implies, the principal ruin is that of a large house. This building stands in the midst of a court or enclosure, and the whole forms the southwest corner of a settlement which measures about four hundred metres from north to south, by two hundred metres from east to west.

The Casa Grande, with its surrounding courtyard, occupies hardly one sixth of the area. The house has been measured so often that it is hardly worth while to repeat the figures. For comparison with the communal type, however, I shall state that I find the outside dimensions to be, in metres,— north side, 13.64; south side, 13.30; east side, 17.82; west side, 17.16. The building is, therefore, not a perfect rectangle, and cannot compare in superficial area with the smallest structures of the communal-house type.

The court enclosing it measures, respectively, 123 and 118 metres longitudinally, and 67.6 metres transversely, across its northern side. Mounds, at present shapeless, cling to the northern wall, and a group of two extends inward from the eastern border. On the southwest corner there is a room still partly standing, elevated above a mound plainly formed of the débris of the whole structure. The northeast corner of the Casa Grande is connected with the eastern line of circumvallation by two transverse walls, one of which passes around a house partly standing, 8.5 × 6.0 metres. South of the southeast corner a mound touches the Casa, and from it another embankment runs transversely to the western side of the enclosure. If the ground-plan of this great house, with its surroundings of minor edifices, courts, and enclosure, is placed by the side of the ground-plan of the most typical ruins in Tonto Creek, the resemblance is almost perfect except in materials used.

Around this cluster a series of low mounds forms a sharp curve, beginning forty metres north of the northwest corner of the outer enclosure, and bending around its northeast corner to the southeast. There is hardly any reason to doubt that these mounds were houses also. This range of ruins forms, with the Casa Grande, the southern half of the entire settlement, while the northern half is distant from it

over one hundred metres. At its southwestern end stands a large elliptical tank, with heavy embankments, and not over 2.5 metres deep. North and northeast of it not less than eight mounds, mostly of elliptical shape, surround a quadrangular artificial platform, 1.80 metres high, and measuring 53.5×51.0 meters, having an elliptical or originally rectangular mound five metres high on its top, and two others on its southwestern corner. The settlement of Casa Grande, therefore, forms two clusters, — a northern group, having in its centre a structure like the one at Tempe, and characterized by an artificial mound supported by an equally artificial platform; and a southern one, a typical ruin like those on Tonto Creek, the Salado, Verde, and Globe. The artificial tank appears to connect both; and the material used, the pottery, and other remains prove them to be but parts of one and the same village.

The Casa Grande proper does not rest on an elevated basis. Its floor, wherever exposed through partial excavations, is lower than the surrounding level. The walls are still standing to a height of at least seven metres, showing in places three stories. At present these three stories contain eleven rooms; but it is probable that the third story extended over the whole surface above the second, thus including four more apartments. As it appears now, it resembles a tower, short and stumpy, rising in the centre of the building.

The outer walls have a thickness of 1.22 metres, and the partitions are 0.92 metre wide. The walls of other buildings, still standing in the same enclosure, although these buildings were two stories high, measure, respectively, only 0.92 and 0.61 metre. Those at the Casa Blanca measure 0.50 metre, and those at the ruins near Florence from 0.45 to 0.60 metre. The outer walls of the Casa Grande, therefore, exhibit a marked degree of solidity.

From the large number of ruins surveyed after leaving Fort Apache, I feel justified in concluding that the Casa Grande is only a remaining illustration of the type of architecture prevailing over the region through which I travelled, and even as far north as Fort Verde, with merely local differences. The matter of the thickness of the walls exemplifies this very strikingly. Walls of stone, laid in mud, are stronger than those of "concrete" of equal thickness. The inhabitants of the Casa Grande could obtain no rock within reasonable distances; so they used marl in its stead, and made the walls correspondingly solid. It is true that at the Casa Grande they are even thicker than those of other ruins in its neighborhood; but this unusual size is explained by the shape and size of the apartments in each structure. The largest ones of the Casa measure 2.86×12.0 metres, or 34.32 square metres; these are the two outer rooms of the ground-plan, north and south. The others show on an average 2.84×7.58 metres, or 21.52 square metres of surface. At the Casa Blanca the largest visible room covers an area of 22.44 metres, and the walls of the building are only half as thick as those at the Casa Grande; but the rooms are nearly square, thus offering much more resistance than the elongated compartments of the latter. The ruins near Globe have two degrees of thickness for the walls, while the material is always the same, stone and mud. Those on elevated points are as much as 0.87 metre thick, while those in the valleys measure 0.60 metre at most, and seldom exceed 0.45 metre. The same is true in the sheltered valley of Tonto Creek. This proves that wherever the buildings were more exposed to strong winds, as on the top of high hills, they were strengthened by greater thickness, while in the less exposed bottoms thinner walls were held to be sufficient. The cave-houses of the Rio Salado are another example. As

these caves face the east, the region whence storms seldom blow, the constructions inside of their shelter are formed by walls not over 0.31 metre thick, and in most places only 0.25 metre in width. Some travellers have stated that on the Upper Rio Verde ruins of the same style of architecture show standing walls 1.50 metres thick. This is not impossible; for at an altitude of above three thousand feet the kind of houses here referred to required greater solidity than fifteen hundred feet lower. Still, the dimensions may have been somewhat exaggerated; but everything shows that the Casa Grande is only a local variety of the architectural type common to all the ruins south of Fort Apache and west of Shibien Creek, which I have called the "detached family house."

The apparent difference is that the houses of the Casa Grande type are more than one story high. The suggestion forces itself upon us that every cluster consisted of a number of small buildings surrounding a central "mansion." This, however, is not supported by the results of investigation on Upper Salt River and on Tonto Creek. These show that the outlying structures grow less in proportion as the central one becomes more prominent. The latter, therefore, is not a building constructed for exceptional purposes, but a dwelling-house raised to several stories for protection as well as in order to secure more room on the same area. The climate is such as to make it imperative to have each cell much larger, hence the increased size of the apartments; but as they had front doorways, they needed an additional outside protection, consequently enclosures and courts were added, establishing a first barrier against surprise.

The structures of the Casa Grande are therefore only a natural growth from the detached family dwelling, a re-agglomeration of the latter into clusters, — exhibiting pro-

gress, inasmuch as they indicate a change from the horizontal to vertical architecture, similar to that which took place farther north, when the small house grew into the many-storied pueblo building.

But that variety of which the Casa Grande appears to be the most perfect specimen shows another feature still, which is new and distinct in the regions of the West. This is the artificial mound, sometimes resting on an artificial platform, and supporting, in most instances, the buildings themselves.

Along the Lower Gila and Salado the copious showers which pour down on the higher mountains are conducted to the plains by "arroyos," which frequently flood the surrounding country for hours. The adobe of to-day suffers less from these sudden overflows; but the so-called concrete of the ancient buildings cannot stand the gnawing effects of water at their base. The Pimas surround their permanent winter houses by semicircular ditches for the purpose of deflecting the currents. I have noticed that artificial mounds occur almost exclusively on the lowest side of each settlement. Even at Old Fort Reno the drainage is such that a sudden cloud-burst might have endangered the houses unless they were placed on a level raised above the ground. The mounds, therefore, seem to have been the product of local causes, and not a distinctive feature applied to a certain class of buildings, like the Teo-calli of Mexico. In one and the same region there are ruins, like the Casa Grande and Tempe, containing buildings on mounds and others on the level ground, other ruins where there are no mounds at all, and still others where the settlement is confined to a mound.

I am, therefore, of the opinion that the mound-building of this part of Arizona was a protective device, called forth by the peculiar conditions of drainage, which threatened struc-

tures resting on the natural level. I will add here that the artificial eminences are found from Pueblo Viejo, on the Upper Gila, along the whole route which I travelled; but that out of forty-seven ruins or groups surveyed I have met with only five where the mounds were very distinct. Four of these are on the Lower Gila and Salado, and one in the Sierra Masásar. But at Pueblo Viejo and at San Carlos there are indications that some of the buildings also rested on elevated platforms.

I have now sketched the material traits which characterize permanent aboriginal architecture over the whole area embraced by my investigations in New Mexico and Arizona. Principal stress has been laid on the points in which the leading types and their varieties differ from each other. I now wish to establish what they all have in common in their architecture as well as their industrial products, and what other illustrations there may be of the mode of life of their former inhabitants.

Beginning with architectural details, I have noticed the following features to be general without exception:—

1. Total absence of cellars or underground chambers. These are frequently spoken of, but are invariably found to be merely depressions in the débris of the ruin. The sunken estufa is a special structure, not included in this rule.

2. Slight depth of the foundations. Solid rock was nowhere removed for the purpose of building foundations; the walls always rest upon it.

3. Absence of regular mortar made of burnt lime and sand. Stone-work and adobe are laid in mud; the concrete of the Gila is a natural compound.

4. Identity in the system and composition of the floor, ceiling, and roof. Floors blackened through washing with

blood are found in the artificial caves of the Rito de los Frijoles as well as in the Casa Grande.

5. The absence of doors and windows proper. Low doorways (those on the Lower Gila, which are among the largest, are not over 1.38 metres in height, by 0.76 metre at the base, and 0.65 metre on the top), and holes for light and air, round or square, without any trace of gypsum panes antedating the Spanish Conquest, are the only perforations of the walls.

6. The use of wooden lintels for doorways, with only an occasional stone lintel inserted. At the Casa Grande, as elsewhere, five or six round or half-round sticks formed the lintels.

7. The lowness of the rooms. At the Casa Grande the floors and ceilings are, respectively, 1.96, 2.10, and 2.00 metres apart; and these dimensions are rarely exceeded farther north.

8. Where circumvallations appear, the entrance is through passages with re-entering angles.

9. The use of gypsum for plastering the walls. This was always done on the inside; but an exterior coat was applied where the material was particularly friable. Thus the Casa Grande has plastering inside and outside.

10. The use of ochre, red or yellow, for painting a wainscoting along the walls.

In the southern ruins we should not look for chimneys; but farther north a regular chimney, with mantel and shelf, built of stone slabs, was found by me in the caves of the Rito de los Frijoles, as well as in cliff-dwellings of the regular detached family-house type.

Thus it appears that while the general features have changed in the forms of houses, the details have remained identical over the whole area.

Of industrial products, those of stone are common to all kinds of ruins; but four species of rocks, or minerals, are most prominent: —

1. Lava, for metates and crushers, mauls or hammers.
2. Basalt or diorite, for axes and hatchets and smoothing-stones.
3. Obsidian.
4. Flint, quartzite, sometimes agate and jasper, for arrow-heads, knives, crushers, etc.

These four varieties of material are to be found in every ruin. This is important, since volcanic rocks, and especially obsidian, are comparatively rare. In many cases it could only have been procured from distant localities or through barter. The shape of the stone axes of Arizona have been described; and the metates, though they vary locally, have one point in common everywhere, that they are without feet; the crushers are everywhere flat, and not cylindrical, as in Mexico. But the small-house metate of New Mexico is different from the communal-house implement in that it is very massive and deeply grooved, whereas the latter is a flat plate, often slightly concave. The former is similar to the metate from the ruins on the Salado, Tonto Creek, and the whole course of the Gila.

Shell ornaments, made especially of univalves, are found in ruins of every class and every section, as are also those made of black and green minerals. The black is not always agate, nor is the green always turquoise. The mineral used depends upon local opportunities; but these colors seem to have been preferred, as were also very transparent rock-crystals, which are found everywhere.

The baskets exhumed on the Salado and in the Tonto Basin show the same method of fabrication as those from the Tsě-yi, and those made to-day by the Indians of Acoma and the Pimas. The cliff-houses of the Tsě-yi, the Tule caves, the communal cave-dwellings on the Upper Salado, and the open-air villages of the same river, have yielded san-

dals made of yucca-slats ; and the fibre of the same plant, twisted into cord, is found in the ruins, and is known to have been used extensively by the pueblo Indians for various kinds of network. I was shown a fringe from the caves on Tonto Creek, made of twine and cord, which recalls strikingly the side-sash worn by the members of the group of the "Bow," at Zuñi, which is called by the Queres, "Hlosh-gă-pönyi." This sash is a badge, which the pueblo Indians to-day manufacture of buckskin.

Cotton cloth has been exhumed in the ruins of the Upper Salt River, and it has been found also in the cliff-houses of the Tsě-yi. At the time of the Spanish conquest the pueblo Indians along the Rio Grande used cotton mantles ; and the plant itself is found growing as far north as Santo Domingo, while tradition says that it was once cultivated in villages even farther north. Although the growth of cotton must have been limited by latitude and altitude, it appears that the inhabitants of all classes of ruins knew how to raise it under favorable circumstances, and to spin and weave it into thread and cloth.

Besides cotton, corn and beans are the crops which have been met with indiscriminately over the whole area. The corn is the well-known small variety, and the beans found on Salt River are also small in size.

Although irrigation was not universally practised, it was known to the inhabitants of both general types of building. "Acequias" are found in connection with communal-house villages, opposite Cochiti, as well as near Fort Apache ; but they also appear with detached family-houses on the Continental Divide about Fort Wingate, and they are specially frequent on the Gila, Salado, and Verde, rivers of Arizona. It is natural that the remains of irrigating ditches should be more frequent in the latter regions, where irrigation alone

could insure the needed crops to a people accustomed to sedentary life with vegetable diet ; but the remains of ancient ditches near Fort McDowell, near Tempe, Phoenix, Florence, Casa Grande, etc., show no evidence of marked progress in hydraulics. As they could not overcome even the slightest natural obstacles in the shape of valleys or gulches even, they have conducted their acequias along the slopes of the hills, following every curve, thus preserving the level, but greatly lengthening the line. The only decided progress is the lining of concrete found near the Tule, and the tubes or channels exhumed at Ahua-tu and on the Continental Divide. These improvements, although local, appear to belong to both classes of architecture.

It is a common opinion, that a number of ruins are located where there is now no water for irrigation, and it is inferred that long ago the topography became changed through some natural convulsion. This idea is based upon the error that irrigation alone insured the success of crops. Corn and beans — although the annual precipitation be but slight, and especially where snow falls — can easily grow without artificial watering. Thus the pueblo Indians on the high Potrereros near Cochití, the Piroes at Quivira and along the Mesa Jumana, and the pueblo Indians on the Mesa de Chaco, could grow their chief vegetable food with the aid of summer rains alone. The same is the case with the scattered villages and houses in the Sierra Masásar ; and it is further exemplified by the system of acequias which depend upon summer rains alone in regions almost devoid of precipitation. This shows that even in such details of agriculture, which necessarily vary according to latitude and topography, the people of the two types of houses had the same degree of knowledge, and followed the same general principles.

Comparing the features which both architectural types have

in common with those in which they differ, the former largely outweigh the latter ; and the differences are the results of geographical causes, which have not destroyed a fundamental unity, and there are no indications of foreign intrusion. The next question is, Which of the two branches stands nearest to the original starting-point, and is therefore to be considered as the purest representation of the common type ?

In No. 1 of the Bulletin, I mentioned the fact that when the first Europeans traversed Arizona and New Mexico they found only the communal-house village, occupied by the sedentary aborigines, with the exception of one tribe, — the Jumanos, who seem to have dwelt in houses similar to the detached family dwelling, — and perhaps the Havasupay of Arizona. It is evident, therefore, that the communal building is the one in which the natives last dwelt. But the pueblo Indians of New Mexico, especially the Zuni, assert that their ancestors first lived in small houses and scattered villages, and that only when enemies began to threaten them did they resort to building communal houses for the purposes of defence. The archæology of New Mexico and Arizona, and of Colorado and Utah in part, now begins to assume more of an historical character, drawn from a combination of aboriginal traditions with mythology, present ethnology, and archæology.

It is logical to suppose that where the simplest form occurs spread over a large territory, this form has had its origin, if not there, at least in that direction, and not in the region where it appears under a more complicated aspect. The detached family-dwelling, without court or outside enclosure, is scattered broadcast over the northern sections of the extensive area. The pueblo Indians of New Mexico, who claim very emphatically to have lived in these detached buildings, claim as positively to have drifted or gravitated towards their

present home from the northwest. Their mythology points to the north and northwest as the final resting-place to which the soul returns.

But we are not concerned with the sedentary Indians alone. They occupied but a comparatively limited space at any one time, whereas roaming tribes overran a greater area in straggling bands. As far as documentary information and the traditions of the pueblo Indians show, these roaming tribes are represented by two groups,—the Utes and the Apaches, including the Navajos. Linguistic information, fortunately, is very precise in regard to these tribes: the former are Shoshones, the latter Tinné; and this places the original homes of the former in the valley of the Columbia, those of the Apaches in Athapasca or in the Northwest. From what I have been able to learn, I infer that the sedentary tribes preceded these nomads in point of time; but the myths of the Navajos, which Dr. Washington Mathews has industriously collected and cautiously scrutinized, show a connection with the pueblo Indians which Zuñi folk-lore does not absolutely reject. Everything conduces to the belief that the population of Southeastern Utah, Southwestern Colorado, Northern Arizona, and Northern New Mexico drifted into the country from the northwest at various times, and with differing forms of culture.

While it is the fact that we have to look to the north for the origin of the sedentary nations, past and present, and of the roaming tribes of to-day, it is equally true that it has been the tendency of all tribes to press to the south and east. In the present instance the traditions of the pueblo Indians of the Rio Grande state that their predecessors, whom they claim as having been similar to themselves in culture, moved southwards; and to them they attribute the ruins which are not those of their former abodes. The

Apaches have spread, within historical times, from New Mexico into Chihuahua and Sonora; the Comanches, through Eastern New Mexico into Texas and Coahuila. Everything inspires the conviction that the sedentary Indians, either through pressure from the outside or from the growth of population, sought for a home farther south, and adapted that home to the necessities of the climate, as well as to the resources of surrounding nature.

While in New Mexico the chain of traditional information appears almost unbroken as far down as San Marcial, in Arizona the folk-lore of the Zuñi terminates, according to Mr. Cushing, with the northern folds of the Escudilla and of the Sierra Blanca. The remarkable architecture prevalent on the Salado, Gila, and Verde has no light shed upon it by their folk-lore tales. Here the statements of the Pimas, which Mr. Walker has gathered, are of special value; and to him I owe the following details. The Pimas claim to have been created where they now reside, and after passing through a disastrous flood,—out of which only one man, *Ci-hö*, was saved,—they grew and multiplied on the south bank of the Gila until one of their chiefs, *Ci-vă-nö*, built the Casa Grande. They call it to-day "*Ci-vă-nö-qi*" (house of *Ci-vă-nö*), also "*Văt-qi*" (ruin). A son of *Ci-vă-nö* settled on Lower Salt River, and built the villages near Phoenix and Tempe. At the same time a tribe with whom they were at war occupied the Rio Verde; to that tribe they ascribe the settlements whose ruins I have visited, and which they call "*O-öt-göm-vătqi*" (gravelly ruins). The Casa Blanca and all the ruins south of the Gila were the abodes of the forefathers of the Pimas, designated by them as "*VI-pĩ-sět*" (great-grandparents), or "*Ho-ho-qöm*" (the extinct ones). (*Ci-vă-nö* had twenty wives, etc.) At one time the Casa Grande was beset by enemies who came from the east in

several bodies, and who compelled its abandonment ; but the settlements at Zacaton, Casa Blanca, etc., still remained, and there is even a tale of an intertribal war between the Pimas of Zacaton and those of Casa Blanca after the ruin of Casa Grande. Finally, the pueblos fell one after the other, until the Pimas, driven from their homes, and moreover decimated by a fearful plague, became reduced to a small tribe. A portion of them moved south into Sonora, where they still reside ; but the main body remained on the site of their former prosperity. I asked particularly why they did not again build houses with solid walls like those of their ancestors. The reply was that they were too weak in numbers to attempt it, and had accustomed themselves to their present mode of living. But the construction of their winter houses, — a regular pueblo roof bent to the ground over a central scaffold, — their organization and arts, — all bear testimony to the truth of their sad tale, — that of a powerful sedentary tribe reduced to distress and decadence in architecture long before the advent of the Spaniards.

The Pimas disclaim having originated in the south, although they do not know anything about the north. But if they profess to have been created on the Gila, it follows that the sedentary tribes north of it can hardly have originated south of that region. Furthermore, the pueblo Indians of New Mexico recognize them as belonging to their own number, and their organization and rites are very similar. There exists a common bond ; but linguistic evidence is wanting as yet to prove whether this common tie originated beyond the reach of traditional testimony. Mere hints are all that favor the assumption that the ruins on the Gila, Salado, and Verde were built by tribes originally of northern extraction. These consist of architectural types, the detached family-house, the resort to the many-storied pueblo-structures wher-

ever retreat into caves became necessary, architectural details, implements of stone, vestments, and especially the pottery, which I have reserved to the last, as it throws an unexpected light upon this question.

Not the texture or quality of the baked clay, but the manner of decoration, is here of importance. Decoration can be executed in two ways,—by moulding and by painting,—frequently by both combined.

While moulded pottery, sometimes with additional decorations in paint, appears to be characteristic of the permanent structures in the Central and Eastern States of this Union, and a moulded pottery, with fair imitations of human and animal forms in high relief, is found in Central Mexico and Central America, the ancient pottery of Colorado, Utah, New Mexico, and Arizona, so far as my knowledge and personal observation go, is exclusively decorated by painting. No vessels of ancient date in human or animal shape have ever been found, and even the simplest moulding along the rim of a bowl is of very rare occurrence. The only attempt at plastic decoration consisted of indentations and corrugations made by the finger-nail. Even where these are most artistically executed, the pottery is so much painted (as at Show-Low) as to prove that this was regarded as of the most consequence. Animal and even human shapes are executed in colors, and not in relief. The ancient pottery, from the Rio Mancos, in Colorado, to Picacho, near Tucson, is exclusively a painted kind; and the designs are analogous, and in many instances identical, at the extreme points, north and south, east and west. Furthermore, over the whole area, with the exception of some communal house villages of modern date, two kinds of ware are invariably found in every ruin; sometimes in quantities, and sometimes only rarely. These are a white pottery and a red, both decorated with black lines.

The patterns are very similar, and there is little difference in the clays and the baking, in localities very far apart. These two varieties of painted ware are most frequent at the north; they diminish gradually towards the south; but still they are found in the Casa Grande, as well as on the Rio de las Animas, in Colorado.

The shapes of the vessels from one extremity of the area to the other show no change; only along the Rio Gila and Lower Salado a new vessel appears, the water-pot (*olla*, in Spanish) with rounded bottom. This innovation has been produced by the necessities of a very hot climate. The olla, suspended from the roof, or supported by a slight frame, which permits the air to circulate about the bottom, and a free evaporation everywhere through the porous clay, is a most beneficial invention.

I would not be understood as maintaining that such testimony, gathered from purely ethnological sources outside of language, should be held sufficient to warrant the tracing of relationship, in special cases; but the value of linguistic affinities is only relative, not absolute, and it is pre-eminent rather for details than for the general scope of history.

Trading also frequently carries the native over vast distances, from which he returns with a store of knowledge, which is made a part of his mythology and rites, while his personal adventures become a part of the folk-lore. It seems strange to find representations of the macaw on ancient pottery from Moqui, and to hear a name for that exotic bird in the archaic language of Zuñi! Sea shells, which occur chiefly near Guaymas, in Sonora, are found among the ruins on Salt River. But these objects of Southern origin do not seem to have had any particular bearing upon the general culture of the people.

The testimony to the effect that certain tribes have in their

displacements moved from south to north is indistinct, and applies only to few cases. The Pimas, for instance, claim that part of their people returned from the south, and the Zufi describe the wanderings of several of their clans to the south of their present site ; but such wanderings do not contradict the main features of history.

Varieties of architectural forms not only indicate local causes and effects upon architectural ideas, but become elements for the reconstruction of local history. Thus if in one section the detached family-house is found in large numbers, and accompanied by communal structures, it suggests the inquiry whether they have not at some time been forced into the latter by aggression. The same thought arises where we see caves with pueblo houses inside, in the vicinity of small or large house communities in the open air, or cliff-houses strung along the walls of a cañon, whose soil affords but scant room for cultivation. These are some of the questions to which architectural variety gives rise, and which a thorough investigation of more ruins may yet enable us to answer.

As far as I can judge, the great number of ruins scattered through New Mexico and its neighboring territories north and west is by no means an evidence of a large population at any one time. In No. 1 of the Bulletin I have given reasons for the opinion, in which I am confirmed by the traditions of the Zufi as well as those of the Pimas, that a large number of ruined villages were successively and not simultaneously occupied by the same people. While the variety in architectural shapes is evidence that the population has fluctuated back and forth, and while it is hardly to be doubted that most of the different classes of houses were simultaneously occupied in sections distant from each other, it is scarcely probable that two or more kinds were inhabited at the same time in

one and the same district. These variations indicate, therefore, the successive changes in population, and are the elementary guides to the local history of a pre-documentary past.

The picture which can be dimly traced to-day of this past is a very modest and unpretending one. No great cataclysms of nature, no waves of destruction on a large scale, either natural or human, appear to have interrupted the slow and tedious development of the people before the Spaniards came. One portion rose while another fell, sedentary tribes disappeared or moved off, and wild tribes roamed over the ruins of their former abodes. But in addition to such changes we should not lose sight of another movement. The Pimas offer an example of a sedentary tribe once living inside of solid walls, and now reduced to a much more modest mode of existence. This occurred before the arrival of the whites. The Jumanos have, within historical times, receded to a state of savagery out of what Mr. Morgan calls the "middle status of barbarism." On the other hand the evolution of the detached family-house from a more transient form shows that less developed tribes can, under favorable circumstances, rise to a higher status through their own efforts. These "favorable circumstances" are not necessarily a country with abundant food, water, and timber, — the very lack of such advantages may become the foundation for invention, as among the tribe of the ancient Mexicans. The suggestion that savages, now extinct as such, have become sedentary in course of time, is therefore not to be rejected.

Whatever agencies contributed to increase or elevate the people of this country during aboriginal times, it remains certain that nowhere they have been able to raise their general culture or ideas of social organization above a very modest level. Their architectural remains, traditions, mythology, customs, arts, and industries all show that the sedentary na-

tives have not attained a conception beyond that of the tribe or a tribal confederacy. The detached family-house villages in no case afford room for more than the members of one or perhaps two clans, — it is only with the communal house that larger tribal proportions appear. The largest pueblos known — those of Pecos, of the Chaco, of the Animas — could not shelter over two thousand persons each, if so many. This, with the traditions, indicates that the ancient inhabitants of New Mexico, Arizona, and of their northern confines, never rose above their descendants of to-day, whose organization has been within documentary time that of a communistic democracy, with prominent military features, and with a controlling element of religion.

In No. 1 of the Bulletin I expressed the hope of being able to determine, through actual observation, whether or not there exists an unbroken chain of remains of permanent aboriginal structures from the north to Central Mexico and beyond, and whichever way this inquiry might result, to observe what lines of former movements are indicated by the distribution and character of these remains. I am now prepared to affirm that the chain is unbroken, except by local geographical interruptions, as far south as the thirty-second parallel. Beyond that I am informed, on authority which I regard as reliable, that ruins extend over Southern New Mexico, and to the Casas Grandes of Northern Chihuahua, down to Lat. 30°. On the Pacific slope there are ruins along the boundary line of Mexico, and south of it, at Magdalena, in Sonora. Farther on I have only indistinct rumors, until Sinaloa is reached, where the existence of ancient villages is certain. From Sinaloa on there are ample traces of a continuous flow southward, so that, until better informed, I can only express the belief that the American aborigines have been sedentary at short distances from each other along the whole line.

In regard to the character of the ruins south of Lat. $32^{\circ} 30'$, I am unable to give positive information as yet. North of that limit it is easy to perceive that there is a gradual approach to more southerly types in several features. In the first place, the rooms grow larger as we advance towards the Mexican border, and the walls, on an average, become notably thicker. The doorways of the Casa Grande show the same trapezoidal form, tapering at the top, as those of the houses in Yucatan. The walls of that building, as well as those on the Gila generally where the friable marl was used, were plastered outside for protection, and incidentally also for decoration. Finally, the artificial platform makes its appearance, supporting other structures. These points of resemblance may be only coincidences, yet it is noteworthy that they appear, and increase in prominence, towards the south. The detached family-house is in theory susceptible of an evolution ultimately resulting in the architecture of Central and Southern Mexico ; and the changes which it has undergone in Arizona seem to indicate a first step in that line. Whether it is real or merely apparent can only be established by following the traces of ancient aboriginal architecture farther to the south.

I have the honor to remain, dear Sir, with the highest respect,

Your most obedient servant,

AD. F. BANDELIER.

II.

FORT LOWELL, ARIZONA, Feb. 2, 1884.

To the President of the Archaeological Institute of America :

SIR, — Among the different factors which have contributed to render the study of ancient remains in New Mexico complicated, and which have stood in the way of identification of historic ruins, the changes in the course of the Rio Grande del Norte are conspicuous. The ruins of the pueblo of Alameda, occupied by the Sandia or Tigua Indians until 1681, now lie at least one mile from the river, in the midst of cultivated fields ; seventy-five years ago they occupied the eastern bank. The waters have since been deflected that distance to the westward.

These phenomena, often repeated at various points of the extensive river-course, have notably influenced the minds of many people. The tale that within historic times a great river flowed southward, east of the Sierra Oscura, Sierra de San Andrés, even of the Sierra de los Organos and of the Paso Range, which stream had been interrupted by the upheaval of the great lava bed south of the Gran Quivira and north of the Sierra Blanca, is deeply rooted and often told. There is very positive evidence to the effect that within the documentary period no such cataclysm has occurred, and the cause of the abandonment of what is called Quivira now is well known. The myth of its having been destroyed by an earthquake is exposed by our knowledge of the events of 1679. The pueblo of Nogales, however, south of the Malpais (or Lava bed), does not come within the scope of documentary information, neither in all probability do several of the villages

of the Mesa Jumana north of Quivira. The tale of volcanic interference with the fate of human occupation may, therefore, yet find a place of refuge in the darkness still shrouding the past of these old settlements.

The compact architecture typified in the communal, many-storied agglomeration of cells called the "pueblo house" reaches its southern limit along the Rio Grande at San Marcial. There the Spaniards found the first villages in 1580, 1582, and 1598. Below that point the detached-house type, in clusters, occupies the river banks at intervals, as far south as Dona Ana probably, certainly to Fort Selden, or Lat. $32^{\circ} 30'$ north. It is confined to the river bottom or its immediate approaches. East and west of it the barrenness of the country forbade permanent abode to the land-tilling aborigines. I have no proof as yet of the existence of ruins farther down the great stream.

My examination of the ruins at the foot of the Cerro San Diego, nine miles south of Rincon, has given ground-plans of small houses of rubble, without connection of the groups or single buildings by contiguous walls of enclosures. The pottery not only shows bright colors, but a much more carefully executed pattern, often composed of fine lines forming geometrical designs of great regularity. Indented and corrugated pottery, painted like that of the ruins at Fort Apache, in Eastern Arizona, flint and basalt chips, and metates of lava, comprise what industrial products remain on the surface.

The dismal barrenness of the country west of the Rio Grande, as far as the Paso del Dragon in Arizona, on a line running due west of Fort Selden, and south to the Mexican boundary, precludes the possibility of important traces of aboriginal occupation being found there. North of that line, however, the mountain valleys abound in vestiges of ancient

Indian habitations. Still it would not be right to include all Southwestern New Mexico and the extreme Southeast of Arizona in one general picture. While the country has one common orographic type, all the mountain chains in four parallel groups running on an average from north-northwest to south-southeast, the hydrographic character is varied and widely diverse in sections.

West of the Rio Grande, and opposite the mountain chains skirting the Jornada del Muerto, the ground rises gradually in broken mesas crossed by vales with streamlets, to the base of the Sierra Mimbres, recently called the "Black Range." These mountains run from north to south, are heavily timbered, and their slopes on both sides bear ruins of the detached family-house type, with enclosures or courts, remains of round towers, and circular tanks. On the east flank these vestiges follow the course of the numerous Arroyos, like the Cañada Alamosa (which, rising in the Sierra Luera, a north-eastern spur of the Mimbres, passing between the Negrita and San Mateo ranges, empties into the Rio Grande in the latitude of the Ojo del Muerto), the Cuchillo Negro, the Rio Palomas, and the Rio Frio; the last three descending directly from the east flank of the Black Range. The ruins are situated on the upper course of the Arroyos, and they disappear where the latter sink, to reappear again on a narrow strip along the river itself. This I have gathered from numerous reports, as well as from a few personal observations.

The western slope of the Black Range is very steep. It descends abruptly into the fine valley of the Rio Mimbres. That stream, rising south of the western Sierra Blanca of New Mexico, runs thence, with frequent interruptions, through sand and gravel accumulations, in a deep valley, as far as twelve miles south of Brockmann's Mills, where it sinks, except in the

rainy season ; its dry bed continuing, past Deming and Carizalillo Springs, to the Laguna Palomas in Mexico. Its course is due north and south, and it is the only northern feeder of an inland water-basin lying between the Sierra Madre and the Rio Grande. This basin, situated in the State of Chihuahua, has no outlet. Several lagunes, like the Palomas and Guzman Blanca, are scattered over its surface ; the eastern flank of the Sierra Madre drains into it from the west, the Rio Casas Grandes from the south.

Towards this centre of drainage the aboriginal villages on the Rio Mimbres have gravitated as far south nearly as the flow of water is now permanent. They are very abundant on both sides of the stream, wherever the high overhanging plateaux have left any habitable and tillable space ; they do not seem to extend east as far as Cook's Range, but have penetrated into the Sierra Mimbres farther north, as far as twenty miles from the river eastward. Similar in disposition, size of rooms, and material of construction, to those of the eastern declivity, and to those around Globe, Arizona, and in the Arroyo Pinal, running into the Upper Rio Salado, they are still distinguished from these Arizona ruins by the lack of connected courtyards, which there consolidate the different groups of buildings and enclosures. Consequently they seem to lack all defensive character, unless approximation into groups of small clusters might be regarded as such. In each cluster a little mound designates the site of the building, and I have not found, among the twenty-five ruins surveyed, more than two in the same assemblage of ruined walls connected together. The total number of ruins scattered as far north as Hicks's Ranch, on a stretch of about thirty miles, along the Mimbres in the valley proper, I estimate at about sixty. This includes, of course, isolated houses, and possibly also watch-houses.

I have not seen a village whose population I should estimate at over one hundred, and the majority contained less. They were built of rubble in mud or adobe-mortar, the walls usually thin, with doorways, and a fireplace in one corner, formed by a recess bulging out of the wall. Towards the lower end of the permanent water-course, the ruins are said to be somewhat more extensive. It is very evident, from the amount of material still extant, from what has been used in building modern constructions, and from the size of the foundations, that whatever houses existed were not over one story high.

In addition to courtyards connected with the edifices proper, there are frequently enclosed spaces without any rubbish indicating houses, and these are sometimes on an inclined plane, at such a slope as would not permit the erection of buildings. The purpose of these enclosed spaces, the largest single one of which measured about 13.0×7.0 metres, is difficult to establish, unless they were, as the Pima tradition states of the Arizona ruins, garden-beds, rudely terraced, like the "Andenes" of Peru. Remains of acequias in the bottoms prove that they used the latter for cultivation, so that garden-beds in the neighborhood of dwellings and above the line of irrigation, even by Arroyos, could only be regarded as measures of precaution in time of danger. The Mimbres overflows its banks about once annually, but the waters subside after two or three days; the danger could only be from enemies prowling around the bottoms, but exposed to detection if they ventured near the dwellings, as the latter are invariably on treeless, if not always on elevated, expanses.

The industrial products accompanying the ruins consist of a pottery which is mostly identical with that about Rincon, consequently similar to that of Eastern Arizona, only more carefully made. The designs are repeated, and those contain-

ing symbolical figures show but slight variations from the symbolical types of the pueblos. The clouds, whirlwind, lightning, are reproduced on several well-preserved vessels. Fic-tile work is limited to lateral indentation and corrugation in the majority of cases, although I have also copied two specimens vertically indented. Painted pottery is not strictly limited to two colors; but it resembles considerably, in pattern and shade, the handsome painted jars from Casas Grandes, in Chihuahua. There is but one resemblance between it and the pottery of the Lower Gila of Arizona, — the presence of black ornaments on white ground in both sections, with identical designs. The red ware with black geometrical decoration has not penetrated so far south. A chocolate-colored ground seems to have taken its place. White on black and on yellow is not uncommon.

Arrow-heads are scarce. They are mostly of white flint and of basalt; obsidian is rare. I have seen a bone awl. Stone axes of diorite and of trap or basalt have invariably the shape peculiar to Southern Arizona, with the crease only on three sides. I have copied, among others, one large specimen as thin and sharp as those from Tempe, on the Lower Rio Salado. Metates, invariably of lava, abound; they have no feet, and the form is similar to that found on Upper Salt River, that is, with a basin-like depression.

Shell beads and turquoise pendants, perforated and polished by attrition, also turquoise beads, have been shown to me; some of which were found in connection with skeletons.

I have had the opportunity of seeing two spots where skeletons were actually exhumed. In both instances they were at a slight depth beneath the surface, — buried in one case on the east side of a wall of enclosure; in the other, inside of an enclosure. I was unable to ascertain clearly the details of sepulchre, except that the bodies were extended at full length. In

the second case they were lying at right angles, the heads touching ; in the first, the several skeletons lay parallel. One skull, evidently of an adult male, was preserved, and it showed a very marked artificial flattening of the occiput.

The valley of the Mimbres is fertile, with a very pleasant climate ; but it is very unhealthy in the lower sections. Malaria is telling severely on its population to-day, and there is no reason to believe that it did not act with even greater severity on the aborigines. The insalubrity of this region may have had more to do with its abandonment in former times, than any hostilities on the part of other tribes. The lack of provisions for defence is rather conspicuous ; still the relatively large proportion of uninjured pottery found seems to indicate a hasty abandonment under pressure of danger from enemies.

Defensive architecture, a result of a disturbed condition posterior to the first settlement, is found, as already stated, in the Sierra Mimbres south of Chloride. But it is also met with, in the shape of cliff-houses, or rather cave-dwellings, northwest of the Mimbres, on the higher Rio Gila above its confluence with the Gilita. That wild and picturesque country, cleft into deep cañons, whose walls of volcanic conglomerate often surmount the narrow fertile and wooded bottoms with columnar crags, well watered, dotted with thermal springs, is admirably fitted for a place of refuge of sedentary Indians from enemies or an injurious climate.

Ascending the Mimbres to about nine miles north of the mining works, the ruins drop off gradually, and a scattered forest of tall yellow pines covers the bottoms. Thence turning nearly westward, the great Continental Divide, probably here a spur of the Pinos Altos, is traversed, and the head-waters of the Rio Sapillo, a tributary of the Upper Gila, are reached. The Divide was probably uninhabited, so that there is a break

of several miles between the ruins of the Mimbres and those on the Sapillo. But this break is geographical only ; in every other way the villages are alike on both streams ; and the pottery, of which the cache on Gatton's Ranch has afforded complete specimens, the axes, arrow-heads, etc. are identical. But the settlements on the Sapillo are even smaller, — a fact easily accounted for by the nature of the ground and the limited area of soil fit for cultivation.

The Sapillo, or rather its bed, joins the Gila about twenty miles below the Ojos Calientes ; but the intervening country is not merely uninhabitable, it is impassable except in a few directions. It may be said that eighteen miles of wooded and craggy waste, very picturesque, divide the two water-courses between Brannan's Ranch and the Ojos Calientes ; and the name of Sierra Diablo, given it on some maps, is not at all inappropriate. On the Gila the same conditions are repeated as on the Sapillo, though on a grander scale of height and ruggedness of the mountains, and consequent depth and gloominess of the gorges. The water-supply is permanently much more abundant ; nevertheless, the open-air settlements are identical in every respect. They are as numerous as the steep elevations of the ground and the narrowness of the bottoms permit, and along or between them natural cavities harbor dwellings of stone, well preserved, sometimes single, again in groups or small villages.

These cave dwellings are properly but one story high, but the compulsory adaptation to the configuration of the ground has caused an accidental approach to two stories. They are instructive for the study of the development of the terraced house of the pueblo Indian. Perfectly sheltered, and therefore quite well preserved, the cave villages are perhaps larger than the open-air ruins, compactness compensating for the limitation in space. But they illustrate the fact that the foundations

remaining of villages built in the open air are frequently only those of courts or enclosures, the mounds alone indicating the site of buildings. Of the twenty-six compartments contained in the caves on Diamond Creek, only nine were clearly elevated structures, as the doorways show; the rest are, in many cases, courts of small dimensions, encompassed by low and still perfect enclosures. The roofs are of the pueblo pattern, well defined; but in one cave the trouble of building them was spared by completely walling up the entrance, with two apertures for admission. The fireplace was a rectangular hearth, as I found it at Pecos, and placed in the centre of the room. The pottery and stone implements are identical with those of the open-air ruins, consequently with those on the Sapillo and Gila. But the dryness of the air inside the caves has preserved the more perishable remains. These show that the yucca plant, common over the whole country, has played a commanding part in the textile industry of the people,—that it has supplied the dress of the inhabitants in summer, as did furs in winter. Nowhere, from the highest Gila to Mangas Springs, west of Silver City,—a stretch of sixty miles,—have I found or heard of cotton fabrics, as on the Upper Salado. But kilts plaited of yucca leaves, analogous to the bark kilts worn to-day by the Yuma Indians of the Gulf of California, and strings of “pita” (yucca fibre), wound around with strips of rabbit fur, such as are used by the Moquis to manufacture heavy mantles for winter use, have been found. Mats of yucca, decorated with painted figures, were met with at Mangas. All these plaitings, as well as the sandals and baskets, are identical with those discovered in Southern Colorado, in the Cañon de Che-yi, at the Tule, on the Salado and along the whole course of the Gila. While the art of tanning, probably with *Rumea venosus*, was evidently well known, it is strange that the buckskin dress and moccason of

to-day are wanting among the aboriginal remains of the caves and cliffs.

I have heard of a rude stone idol found in a cave on the Upper Gila. Wooden idols were exhumed at Mangas Springs; also a fetich of obsidian, and prayer plumes, similar to those of the present pueblo Indians, all deeply imbedded in bat manure. Turquoise beads are abundant on the Sapillo. The usual poor quality of callainite has been found near Santa Rita, but no traces of former diggings were mentioned or noticed.

Caves containing remains of buildings are also scattered along the Gila, farther up and down; and wherever the topography permits, villages were erected in open spaces. These traces of permanent habitation are interrupted occasionally by the topography alone; they connect, at Clifton in Arizona, with those of the Rio San Francisco coming down from the Tularosa Range of New Mexico, and through Eagle Creek they approach the Prieto Plateau, and consequently the region of Fort Apache. Farther west begins, at Pueblo Viejo, the region which I traversed on my last journey, in 1883.

South of the Gila, from Mangas Springs to near Pueblo Viejo, extends, to a distance yet unknown to me, the arid and anciently uninhabitable region mentioned before. There are indications that this area devoid of ruins may cover nearly a whole degree of latitude.

Returning to the Rio Mimbres and thence westward, there are few, if any, traces of habitation between it and Silver City. The scarcity of water, even where there are patches of arable ground, would almost preclude any possibility of their presence. That region contains the famous copper mines of Santa Rita. Native copper in large sheets and in lumps abounds in those rich deposits, and a number of old Spanish implements are scattered about, in private hands. But while

I have made diligent research at every available point, I have not been able to find any trace of the use of copper by the former natives. Perhaps the absence of drift copper may account for it.

At Silver City, thirty-two miles west from the Mimbres, the Arroyo San Vicente, one of its tributaries, arises, and is permanent for a few miles. Ruins exist at Silver City proper. Their ground-plans agree, as well as their pottery and stone implements, with those of the Mimbres and Upper Gila.

I have the honor to remain, with highest respect,

Yours obediently,

AD. F. BANDELIER.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

THIRD ANNUAL REPORT

OF THE

COMMITTEE ON THE AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS.

1883-84.

AMERICAN SCHOOL OF CLASSICAL STUDIES
AT ATHENS.

Managing Committee.

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WILLIAM W. GOODWIN, Harvard University, Cambridge, Mass.

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FREDERICK J. DE PEYSTER (*Treasurer*), 7 East 42d St., New York, N. Y.

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W. S. TYLER, Amherst College, Amherst, Mass.

J. C. VAN BENSCHOTEN, Wesleyan University, Middletown, Conn.

Directors.

WILLIAM WATSON GOODWIN, Ph. D., LL. D., Eliot Professor of Greek Literature in Harvard University. 1882-83.

LEWIS R. PACKARD, Ph. D., Hillhouse Professor of Greek in Yale College. 1883-84.

JAMES COOKE VAN BENSCHOTEN, LL. D., Sney Professor of the Greek Language and Literature in Wesleyan University. 1884-85.

Co-operating Colleges.

AMHERST COLLEGE.

HARVARD UNIVERSITY.

BROWN UNIVERSITY.

JOHNS HOPKINS UNIVERSITY.

COLLEGE OF THE CITY OF NEW YORK. UNIVERSITY OF CALIFORNIA.

COLLEGE OF NEW JERSEY.

UNIVERSITY OF MICHIGAN.

COLUMBIA COLLEGE.

UNIVERSITY OF PENNSYLVANIA.

CORNELL UNIVERSITY.

UNIVERSITY OF VIRGINIA.

DARTMOUTH COLLEGE.

WESLEYAN UNIVERSITY.

YALE COLLEGE.

THIRD ANNUAL REPORT

OF THE COMMITTEE

ON THE

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

To the Executive Committee of the Archaeological Institute:

GENTLEMEN, — At a meeting held in New York on April 6, 1882, the Committee in charge of the American School of Classical Studies at Athens, then numbering ten members, appointed a sub-committee of two to draw up for publication a statement of the manner in which the School had been organized, the object of its establishment, and the regulations by which it was to be controlled. This statement was based upon the "Project for the Establishment of an American School of Classical Studies at Athens" and the accompanying letter, addressed to the Presidents of the Colleges which were to be invited to co-operate in the foundation of the School, which had been published in December, 1881, (see First Report, pages 4-7,) with such changes of detail as the Committee had subsequently made. This statement has since been modified from time to time by the action of the Committee. I have now the honor to present it to you at the end of this Report in

codified form as the body of Regulations by which the School is controlled. I have prefixed to this Report at the same time the names of the Managing Committee of the School, of the Directors of the School, and of the Colleges uniting in its support.

By vote of the Committee on November 16, 1883, the Chairman was instructed to extend an invitation to the University of Pennsylvania to unite with the Colleges associated in support of the School. This invitation was accepted. The co-operating Colleges now number fifteen. Much to the regret of the Committee three Colleges to which the invitation had been extended have signified during the present year their inability to co-operate,—Williams College, Bowdoin College, and the Massachusetts Institute of Technology.

By vote of the Committee on May 18, 1883, Professor Martin L. D'Ooge of the University of Michigan was made a member of the Managing Committee, and Professor W. W. Goodwin of Harvard University, who had previously been an *ex officio* member as Director of the School, was made a permanent member. The resignation of Professor E. W. Gurney of Harvard University was received and reluctantly accepted at the meeting on November 16, 1883. Professor Gurney was one of the five members of the Committee as first appointed by the Institute, and to him is largely due the successful development of the plan on which the School was organized.

At this meeting the Committee unanimously invited J. C. Van Benschoten, Professor of Greek in Wesleyan University, to become the Director of the School during its third year; and the invitation was subsequently accepted. The Committee congratulates itself on the acceptance of Professor Van Benschoten, who from previous residence in Greece, large topographical knowledge of the country, and interest in archæological studies, is singularly well fitted to undertake the direction of the School. The Committee further changed the regulation by which the Director could be elected only from the Professors of Greek in the Colleges uniting in support of the School, and threw the directorship open to Professors generally in the co-operating Colleges. In accordance with a vote passed at this meeting the Chairman and Secretary, on January 10, 1884, sent a circular letter to the President and Faculty, and also to the Professor of Greek, of each co-operating College, stating what opportunities for classical study the School affords; inviting them to bring these opportunities, extended free of charge for tuition, to the attention of their students; and asking them to urge upon their Trustees the advantages to be gained by the creation of travelling scholarships to facilitate the attendance at the School of graduates of moderate means. The attendance at the School was larger during the first year than it has been during the second. This was to be expected, since opportunities for systematic study at Athens

under skilled direction were then offered for the first time to American students, and immediately attracted to the School pupils who have subsequently returned to other parts of Europe and to America for the completion of their studies. There is good reason to believe that a number of competent students will be in attendance at the School during the coming year.

The second year of the School was opened by the Director, Professor Lewis R. Packard, at Athens, October 6, 1883, in the house on the 'Οδὸς Ἀμαλίας occupied by the Director during the first year. The regular members of the School during its second year have been the following:—

Walter Ray Bridgman, A. B. (Yale College, 1881), holder of the Soldiers' Memorial Fellowship in Yale College.

Alexander Martin Wilcox, A. B. (Yale College, 1877), Ph. D. (Yale College, 1880).

Professor Packard, having been disabled by serious illness before reaching Athens, requested Dr. J. R. S. Sterrett—who had been a member of the School in 1882–83, and who was then at Smyrna on the eve of departing into the interior of Asia Minor in further prosecution of his epigraphical researches—to return to Athens and assist him in the work of the School. Dr. Sterrett at once complied with the request, and has remained at Athens until the present month. Professor Packard writes in terms of praise of Dr. Sterrett's devotion to the interests of the students

during the time when he himself was too ill to direct their work. In consideration of these facts the Committee, by unanimous vote, made a grant to Dr. Sterrett, in February, 1884, of five hundred dollars, "as an expression of their gratitude for the services rendered by him to the School, and of their interest in and high appreciation of the results of his personal studies." Dr. Sterrett proposes to spend the coming summer in Asia Minor on an expedition through some of the least well known regions of the land, in company with Mr. W. M. Ramsay. The volume of Papers of the School about to be published will show conclusively the singular fitness of Dr. Sterrett for the work to which he has devoted himself.

The Director's house was furnished by the Committee during the first year with the heavier and most needful articles at an expense of \$1175. Some additions have been made to the furniture during the present year, but it is still true that the Director himself furnishes his house in part. The library of the School has received large additions, so that when the books now ordered shall have been received it will number about eight hundred volumes (exclusive of periodicals and pamphlets), illustrating the history, geography, antiquities, and art of ancient Greece. Works of this kind are expensive, and at the end of the second year the books in the library obtained by direct purchase will have cost \$2500. Of this sum the Committee voted from its funds \$2000. The remain-

ing \$500 was the gift of a friend of the School who does not permit his name to be mentioned, made through the Hon. Eugene Schuyler, Minister of the United States at Athens, who in many other ways has advanced the interests of the School. In addition to the volumes obtained by direct purchase through the authority of the Committee, others have been received from individual friends who appreciated the importance of the library to the members of the School and desired its enlargement. And it is important that the student should have easy command during the whole of the day and evening in a comfortable room of the books needed for the successful prosecution of the work in which he is engaged. The economy of time and labor and temper thus secured is great. It is earnestly to be hoped that through the liberality of friends and such yearly appropriations as the Committee shall be able to make the School will soon come to possess a good special consulting library. It is neither possible nor desirable to add to the collection works of a miscellaneous character.

Six of the seven regular members of the School during the first year named in my last Report completed the full year's study with results approved by the Director, and will, in accordance with the regulations, each receive a certificate stating the work accomplished by him and signed by the Director of the School, the President of the Archæological Institute, and the other members of the Committee. The theses

presented by these gentlemen were upon the following subjects : —

1. The Pnyx : by Dr. CROW (who had the benefit of a new and careful survey of the so-called Pnyx at Athens, made by Mr. Joseph T. Clarke).
2. The Erechtheum : by Mr. FOWLER.
3. The Life, Poems, and Language of Theocritus, with specimens of a Commentary : by Mr. SHOREY.
4. The Inscriptions discovered at Assos by the Expedition of the Archæological Institute of America : by Dr. STERRETT.
5. The Value of Modern Greek to the Classical Student : by Mr. TAYLOR.
6. The Theatre of Dionysus at Athens : by Mr. WHEELER.

These theses, in conformity to the regulations, were sent by the Director to me as Chairman of the Managing Committee, and were by me submitted in each case to a sub-committee of three for examination. Those recommended for publication will appear in the first and second volumes of the Papers of the School.

The Report of the first Director, Professor W. W. Goodwin, was presented to the Committee at its first semiannual meeting for the year, held at New York on November 16, 1883. This Report was approved, and was subsequently printed as the first Bulletin of the School, and has received wide circulation. At this meeting the sub-committee on the Publications of the School, which had been appointed a year previously and had reported progress at the following semiannual

meeting in May, made a final report in print which was adopted with some modifications. According to the plan adopted, the Committee is to publish, in addition to Bulletins containing the reports of Directors, a yearly volume of Papers of the School to be made up from the work of the Director and students during the previous year. This volume, as also the Bulletins, is to conform in general style to the Papers of the Archæological Institute. The expense of these publications, to an amount not exceeding \$1000 per annum, is to be met from the funds of the School. Copies of all publications are to be sent free to the libraries of the co-operating Colleges and to such learned bodies as the Committee may select, and are further to be placed for sale at a proper discount with leading booksellers. The proceeds of sales are to be appropriated toward the cost of publication. The first volume of Papers will be edited by Professor Goodwin and Mr. Thomas W. Ludlow, the Secretary of the Committee. The material is now ready, and the volume will go to press immediately. It is expected that the second volume of Papers will follow within less than a year.

Your Committee, from the time of its appointment by the Archæological Institute at its annual meeting in the year 1881, has kept in mind its original plan of ultimately establishing the School upon the basis of a permanent endowment. The present plan both for the maintenance and for the direction of the School is temporary. All obligations assumed by the co-

operating Colleges will cease at the end of ten years, that is, with the close of the college year 1891-92. Several of the Colleges, indeed, subscribe from year to year, without a definite pledge of continuing their contributions for the entire term; and in the instance of one of them the subscription is still provisional. But the Committee, with the experience of two years to guide it, is convinced that the adoption in 1881 of the present plan of organization was wise. It may be true that it would have been better if the School could then have been opened with a more stable and elaborate organization than the present, on a basis of support assured by a permanent endowment of \$150,000. But it is also true that it would probably have been impossible to obtain a permanent endowment of this amount before the importance of such a School to the advance of classical studies in America had been demonstrated. The plan adopted was practicable. And while temporary in character and possessed of features which would be open to objection if it were to be permanent, it has much to commend it. The close union of fifteen Colleges in the promotion of a common object is a spectacle unique in this country, where the relations between the colleges are far too slight, and it is a cheering indication of the future successful development among us of classical studies in fields heretofore little cultivated. These Colleges have agreed each to contribute annually a sum for the furtherance of the object for which the School

was founded, to send from their number each year to Athens a Director to take charge of its work, and to encourage young men of promise among their graduates to avail themselves of the opportunities it offers. But the interest thus awakened by active participation extends beyond the Colleges. For the yearly contributions are made, in the majority of instances, by graduates and friends of the contributing Colleges, who thus become personally interested in the work and welfare of the School. If the School demonstrates its usefulness, it will be this large body of friends, and those whom they will address, who will not leave unheeded an appeal for a permanent endowment.

One peculiar feature of the present temporary organization of the School which distinguishes it from the German and French schools in Athens is the yearly change of Director. That the Director should through all the future history of the School continue to be a Professor sent from one of the contributing Colleges under an annual appointment is an arrangement which would be as undesirable as it would be impossible. The objections to this as a permanent plan have been forcibly stated by the first Director in his report to your Committee. But such an arrangement is not contemplated. When established by a permanent endowment, the School will be under the control of a permanent Director, — a scholar who by continuous residence at Athens will gradually accumulate that body of local and special knowledge without which the

highest functions of the School cannot be maintained. In the mean time the School has a special duty of great importance, which its present organization enables it to meet. It cannot hope immediately to accomplish special work in archæological investigation which will put it on a level with the German and French schools. They also had their time of growth. And an American school in particular should at the first not so much aim at distinguished achievements as seek to arouse in American Colleges a genuine interest in classical archæology in general. The lack of such interest heretofore is conspicuous. Without such interest an American School at Athens, however well endowed, could not accomplish the best results. That the presence in various Colleges of Professors who shall have been resident a year at Athens under favorable circumstances, in practical direction of the School, will do much to increase this interest, must be beyond dispute.

Your Committee, therefore, are hopeful of good results of wide-spread influence from the present organization of the School. But nevertheless having from the first seen the necessity of taking steps for the accumulation of a permanent endowment, they instructed their chairman, at their semiannual meeting held in New York on November 16, 1883, to appoint a provisional committee of three to report at their next regular meeting a detailed scheme for securing a permanent fund. This provisional committee, fur-

ther, is to nominate a permanent committee, represented in the chief cities throughout the country, to carry out the scheme and to appoint trustees, whose duty it shall be to take charge of the funds as collected, to invest them, and to hold them in trust for the purposes of the School. I shall hope from time to time in the future to report to you the successful execution of this plan.

JOHN WILLIAMS WHITE,

Chairman.

THE AMERICAN SCHOOL OF CLASSICAL
STUDIES AT ATHENS.

THE American School of Classical Studies at Athens, projected by the Archæological Institute of America, and organized under the immediate auspices of some of the leading American Colleges, was opened on October 2, 1882. It occupies a house on the 'Ὀδὸς Ἀμαλίας, at Athens, in which a large room is set apart for the use of the students. This room is lighted in the evening, and warmed in cold weather. In it is kept the library of the School, which includes a complete set of the Greek classics, and the most necessary books of reference for philological, archæological, and architectural study in Greece. The library contained, at the close of the year 1883-84, 800 volumes, exclusive of sets of periodicals.

The advantages of the School are offered, free of expense for tuition, to graduates of Colleges co-operating in its support, and to other American students deemed by the Committee of sufficient promise to warrant the extension to them of the privilege of membership.

The School is at present unable to provide its students with board or lodging, or with any allowance for other expenses. It is hoped that the Archæological Institute may in time be supplied with the means of establishing scholarships. In the mean time students must rely upon their own resources, or upon scholarships which may be granted them by the Colleges to which they belong. The amount needed for the expenses of an eight months' residence in Athens will differ little from that required in other European capitals, and will depend chiefly on the economy of the individual.

The address of the Chairman of the Committee is Cambridge, Mass.; of the Secretary, Yonkers, N. Y.; of the Treasurer, 7 East 42d Street, New York.

REGULATIONS OF THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS.

I. The object of the American School of Classical Studies is to furnish, without charge for tuition, to graduates of American Colleges an opportunity to study Classical Literature, Art, and Antiquities in Athens, under suitable guidance; to prosecute and to aid original research in these subjects; and to co-operate with the Archæological Institute of America, as far as it may be able, in conducting the exploration and excavation of Classic sites.

II. The School is in charge of a Managing Committee, and under the superintendence of a Director. The Director of the School and the President of the Archæological Institute are *ex officio* members of the Managing Committee. This Committee, which was originally appointed by the Archæological Institute, has power to add to its membership, to administer the finances of the School, and to make such regulations for its government as it may deem proper.

III. The Managing Committee meets semiannually, in New York on the third Friday in November, and in Boston on the third Friday in May. Special meetings may be called at any time by the Chairman.

IV. The Chairman of the Committee is the official representative of the interests of the School in America. He is to present a Report annually to the Archæological Institute concerning the affairs of the School.

V. The Director is chosen by the Committee, for a period of one or two years, from the Professors of the Colleges uniting in the support of the School. The Committee provides him with a house in Athens, containing apartments for himself and his family, and suitable rooms for the meetings of the members of the School, its collections, and its library.

VI. The Director superintends personally the work of each member of the School, advising him in what direction to turn his studies, and assisting him in their prosecution. He conducts no regular courses of instruction, but holds meetings of the members of the School at stated times for consultation and discussion. He makes a full report annually to the Managing Committee of the work accomplished by the School.

VII. The school year extends from the 1st of October to the 1st of June. Members are required to prosecute their studies during the whole of this time in Greek lands, under the supervision of the Director. The studies of the remaining four months necessary to complete a full year (the shortest term for which a certificate is given) may be carried on in Greece or elsewhere, as the student prefers.

VIII. Bachelors of Arts of co-operating Colleges, and all Bachelors of Arts who have studied at one of these Colleges as candidates for a higher degree, are admitted to membership in the School on presenting to the Committee a certificate from the instructors in Classics of the College at which they have last studied, stating that they are competent to pursue an independent course of study at Athens under the advice of the Director. All other persons desiring to become members of the School must make application to the Committee. The Committee reserves the right to modify these conditions of membership.

IX. Each member of the School must pursue some definite subject of study or research in Classical Literature, Art, or Antiquities, and must present yearly one or more theses embodying the results of his work. These theses, if approved by the Director, are sent to the Managing Committee, by which each thesis is referred to a sub-committee of three members, of whom two are appointed by the Chairman, and the third is always the Director under whose supervision the thesis was prepared. If recommended for publication by this sub-committee, the thesis may be issued in the Papers of the School.

X. When any member of the School has completed one or more full years of study, the results of which have been approved by the Director, he receives a certificate stating the work accomplished by him, signed by the Director of the School, the President of the Archæological Institute, and the other members of the Managing Committee.

XI. American students resident or travelling in Greece who are not members of the School, but who come properly recommended as earnest students, will receive the assistance and advice of the Director in the prosecution of their studies, and will be allowed at his discretion to use the library belonging to the School.

Thomas Wilson

Archaeological Institute of America.

SIXTH ANNUAL REPORT.

1884-85.

PRESENTED AT THE ANNUAL MEETING OF THE
COUNCIL OF THE INSTITUTE,

BOSTON, MAY 9, 1885.



CAMBRIDGE:
JOHN WILSON AND SON,
University Press.
1885.

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1

2

3

CONTENTS.



COUNCIL	5
OFFICERS OF LOCAL SOCIETIES	7
REGULATIONS	9
LIST OF MEMBERS:— FOREIGN HONORARY MEMBERS	15
BOSTON SOCIETY	15
BALTIMORE SOCIETY	21
NEW YORK SOCIETY	23
REPORT OF THE COUNCIL FOR 1884-85	27

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Council, 1885-86.

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HENRY DRISLER, NEW YORK, *Vice-President.*

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ALFRED EMERSON, BALTIMORE.

Treasurer.

GEORGE WIGGLESWORTH,

8 CONGRESS STREET, BOSTON.

Secretary.

ARTHUR L. FROTHINGHAM, JR.,

29 CATHEDRAL STREET, BALTIMORE.



OFFICERS OF LOCAL SOCIETIES.

BOSTON SOCIETY.

Executive Committee, 1885-86.

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Corresponding Secretary.

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CHARLES P. DALY.
HOWARD CROSBY.
HENRY G. MARQUAND.*Treasurer.*

ROBERT HOBART SMITH.

Secretary.

WILLIAM R. WARE.

*Committee on Membership.*EDWARD F. DE LANCEY.
S. G. WARD.
HENRY H. GORRINGE.
EDWARD H. KENDALL.
AUGUSTUS C. MERRIAM.
JAMES B. LUDLOW.

REGULATIONS

ADOPTED MAY 17, 1879.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA is formed for the purpose of promoting and directing archæological investigation and research, — by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A. M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

AT a meeting of the members of the Institute, held in Boston, October 11, 1884, the following Regulations were adopted, to go into effect November 1, in lieu of those previously in force.

REGULATIONS

ADOPTED OCTOBER 11, 1884.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA, consisting of a number of affiliated societies, is formed for the purpose of promoting and directing archæological investigation and research,—by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of archæological papers and of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Annual and of Life Members, the former being those persons, approved by the Council, who shall pay an annual assessment of \$10, and the latter such as shall contribute at one time not less than \$100 to its funds. Classes of Honorary and Corresponding Members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The government of the Institute shall be vested in a Council, annually chosen by the members of the affiliated societies, as follows:—

Any local archæological society, consisting of not less than ten members of the Institute, may, by vote of the Council, be affiliated with the Institute. Any such local society shall have the right to elect one member to the Council. When the members of such society shall exceed fifty, they shall have the right to elect a second member to the Council, and similarly another member for each additional fifty.

4. The Council shall hold an Annual Meeting on the second Saturday of May, at 11 o'clock A. M., at such place as may be se-

11. The Council shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the available funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute. It shall have no other jurisdiction over the regulations or actions of the affiliated local Archæological Societies, than that these societies shall not undertake any formal publication without its consent ; and any moneys contributed for any object promoted by a local society, approved by the Council, shall be strictly appropriated to that object.

12. At each Annual Meeting the Council shall appoint a Standing Committee of not less than three of its members, to edit the publications of the Institute for the ensuing year, and to prepare an Annual Report to be presented in print at the next Annual Meeting.

13. Any collections of antiquities which may come into the possession of the Institute through the explorations undertaken by it, or otherwise, may be sold, at the discretion of the Council, to the museum or other public institution in the United States which may offer for them the largest sum ; it being understood that contributions toward the cost of any exploration may be assigned by the donors to the credit of any museum or public institution as part of the purchase money.

14. A general meeting of the Institute may be called from time to time, at the discretion of the Council.

15. Each member of the Institute shall receive a copy of every publication of the Institute issued during the period of his membership.

16. The names of all affiliated societies and members shall be printed with the annual report of the Council.

17. Each affiliated society shall designate its local name in the following style :

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

And it shall be known as the _____ on its _____

18. Amendments to these regulations, of which printed notice has been sent to each member of the Council not less than two weeks previously, may be proposed by any three members at any Annual Meeting, and shall require for adoption the affirmative vote of three fourths of the whole number of members of the Council.

•

LIST OF MEMBERS
OF THE
ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FOREIGN HONORARY MEMBERS.

HEINRICH BRUNN	Munich.
ALEXANDER CONZE	Berlin.
ERNST CURTIUS	Berlin.
GEORGE DENNIS	Smyrna.
KARL HUMANN	Smyrna.
G. C. C. MASPERO	Cairo.
THEODOR MOMMSEN	Berlin.
C. T. NEWTON	London.
G. B. DE ROSSI	Rome.
W. H. WADDINGTON	Paris.

BOSTON SOCIETY.

Life Members.

Alexander Agassiz	Cambridge.
Frederick L. Ames	Boston.
William Amory	”
* Thomas G. Appleton	”
Elisha Atkins	”
Francis H. Bacon	”
Joseph T. Bailey	”

* The names marked with an asterisk are those of deceased members.

Adolph F. Bandelier	Highland, Ill.
E. Pierson Beebe	Boston.
Stanton Blake	"
J. Ingersoll Bowditch	"
Charles S. Bradley	Providence.
George L. Bradley	Pomfret Centre, Conn.
John L. Bremer	Boston.
Mrs. Gardner Brewer	"
Martin Brimmer	"
Mrs. Martin Brimmer	"
William S. Bullard	"
Arthur Astor Carey	Cambridge.
George B. Chase	Boston.
Joseph Thacher Clarke	"
Thomas M. Clarke	Providence.
George H. Corliss	"
G. W. W. Dove	Andover.
William Endicott, Jr.	Boston.
Dana Estes	"
Glendower Evans	"
Charles Fairchild	"
Ezra Farnsworth	"
John M. Forbes	"
Manning F. Force	Cincinnati.
William W. Goodwin	Cambridge.
Horace Gray	Boston.
Russell Gray	"
Samuel A. Green	"
E. W. Gurney	Cambridge.
N. P. Hallowell	Boston.
Rowland Hazard	Peace Dale, R. I.
Mrs. Augustus Hemenway	Boston.
George Higginson	"
Henry L. Higginson	"
*Miss Alice S. Hooper	"
*Mrs. Samuel Hooper	"
E. N. Horsford	Cambridge.
James F. Hunnewell	Boston.

Samuel Johnson	Boston.
Henry P. Kidder	"
Gardiner M. Lane	"
Henry Lee	"
Thornton K. Lothrop	"
John Lowell	"
Miss Ellen F. Mason	"
Miss Ida N. Mason	"
*Otis Norcross	"
Charles Eliot Norton	Cambridge.
Robert Treat Paine	Boston.
Francis E. Parker	"
Francis Parkman	"
Oliver W. Peabody	"
Henry L. Pierce	"
*John C. Phillips	"
Louis Prang	"
Richard Price	Topsfield.
C. A. L. Richards	Providence.
Henry B. Rogers	Boston.
Stephen Salisbury	Worcester.
Samuel H. Scudder	Cambridge.
Philip H. Sears	Boston.
Mrs. G. Howland Shaw	"
Quincy A. Shaw	"
Mrs. E. A. Shepard	Providence.
Mrs. Jared Sparks	Cambridge.
William Eliot Sparks	Taunton.
Richard Sullivan	Boston.
Royal C. Taft	Providence.
*Isaac Thacher	Boston.
*Clement A. Walker	"
Charles E. Ware	"
Samuel D. Warren	"
William B. Weeden	Providence.
Mrs. Henry Whitman	Boston.
Henry Austin Whitney	"
John Woodbury	"

*OFFICERS OF LOCAL SOCIETIES.***NEW YORK SOCIETY.***President.*

FREDERIC J. DE PEYSTER.

*Vice-Presidents.*HENRY C. POTTER.
CHARLES P. DALY.
HOWARD CROSBY.
HENRY G. MARQUAND.*Treasurer.*

ROBERT HOBART SMITH.

Secretary.

WILLIAM R. WARE.

*Committee on Membership.*EDWARD F. DE LANCEY.
S. G. WARD.
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ADOPTED OCTOBER 11, 1884.

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4. The Council shall hold an Annual Meeting on the second Saturday of May, at 11 o'clock A. M., at such place as may be se-

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At a meeting of the members of the Institute, held in Boston, October 11, 1884, the following Regulations were adopted, to go into effect November 1, in lieu of those previously in force.

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lected by its members at the previous Annual Meeting. Any member of the Council unable to be present at any meeting may appoint by writing any other member to act as his proxy. One half of all the members of the Council, present in person or by proxy, shall form a quorum.

5. Special meetings of the Council may be called by the Secretary, upon direction of the President, or at the written request of one third of its members.

6. At the Annual Meeting the Council shall elect one of its members as President, and another as Vice-President of the Institute. These officers shall be eligible for re-election.

7. A Secretary and Treasurer of the Institute shall be chosen by the Council, and shall hold office at its pleasure. The Secretary shall keep a record of the transactions of the Council, and shall perform such other duties as pertain to his office. The Treasurer shall collect, receive, and keep account of all assessments, subscriptions, and gifts of money to the Institute, shall pay its dues, and shall present to the Council at its Annual Meeting a written statement of accounts.

8. Assessments, subscriptions, and donations may be paid to the Treasurer, or to any member of the Council. No person, not a life member, who has not paid his dues as member for the year then past, shall be entitled to vote in the election of members of the Council. The year shall be considered as closing with the end of the Annual Meeting, and from this time the assessment for the year then ensuing shall become due.

9. Ten per cent of all annual dues received from each affiliated Society shall be held by the Treasurer, subject to the call of the Treasurer of the affiliated Society, for the discharge of local expenses. In case any Society does not in any year require the whole of this sum, the balance shall, at the end of the year, be passed into the general funds of the Institute, not subject to future call. Grants in aid of local societies may be made by the Council.

10. The accounts of the Institute shall be submitted annually by the Treasurer to two Auditors, to be appointed by the President, who shall attest by their signatures the correctness of said accounts, and report the same at the annual meeting.

11. The Council shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment; to employ agents, and to expend all the available funds of the Institute for the purpose for which it is formed; but it shall not have the power to incur any debt on behalf of the Institute. It shall have no other jurisdiction over the regulations or actions of the affiliated local Archæological Societies, than that these societies shall not undertake any formal publication without its consent; and any moneys contributed for any object promoted by a local society, approved by the Council, shall be strictly appropriated to that object.

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17. Each affiliated society shall be designated by its local name in the following style:—

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

BALTIMORE SOCIETY.

And it shall have the right to use the seal of the Institute on its official papers.

18. Amendments to these regulations, of which printed notice has been sent to each member of the Council not less than two weeks previously, may be proposed by any three members at any Annual Meeting, and shall require for adoption the affirmative vote of three fourths of the whole number of members of the Council.

LIST OF MEMBERS
OF THE
ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FOREIGN HONORARY MEMBERS.

HEINRICH BRUNN	Munich.
ALEXANDER CONZE	Berlin.
ERNST CURTIUS	Berlin.
GEORGE DENNIS	Smyrna.
KARL HUMANN	Smyrna.
G. C. C. MASPERO	Cairo.
THEODOR MOMMSEN	Berlin.
C. T. NEWTON	London.
G. B. DE ROSSI	Rome.
W. H. WADDINGTON	Paris.

BOSTON SOCIETY.

Life Members.

Alexander Agassiz	Cambridge.
Frederick L. Ames	Boston.
William Amory	”
* Thomas G. Appleton	”
Elisha Atkins	”
Francis H. Bacon	”
Joseph T. Bailey	”

* The names marked with an asterisk are those of deceased members.

Adolph F. Bandelier	Highland, Ill.
E. Pierson Beebe	Boston.
Stanton Blake	”
J. Ingersoll Bowditch	”
Charles S. Bradley	Providence.
George L. Bradley	Pomfret Centre, Conn.
John L. Bremer	Boston.
Mrs. Gardner Brewer	”
Martin Brimmer	”
Mrs. Martin Brimmer	”
William S. Bullard	”
Arthur Astor Carey	Cambridge.
George B. Chase	Boston.
Joseph Thacher Clarke	”
Thomas M. Clarke	Providence.
George H. Corliss	”
G. W. W. Dove	Andover.
William Endicott, Jr.	Boston.
Dana Estes	”
Glendower Evans	”
Charles Fairchild	”
Ezra Farnsworth	”
John M. Forbes	”
Manning F. Force	Cincinnati.
William W. Goodwin	Cambridge.
Horace Gray	Boston.
Russell Gray	”
Samuel A. Green	”
E. W. Gurney	Cambridge.
N. P. Hallowell	Boston.
Rowland Hazard	Peace Dale, R. I.
Mrs. Augustus Hemenway	Boston.
George Higginson	”
Henry L. Higginson	”
*Miss Alice S. Hooper	”
*Mrs. Samuel Hooper	”
E. N. Horsford	Cambridge.
James F. Hunnewell	Boston.

Samuel Johnson	Boston.
Henry P. Kidder	"
Gardiner M. Lane	"
Henry Lee	"
Thornton K. Lothrop	"
John Lowell	"
Miss Ellen F. Mason	"
Miss Ida N. Mason	"
*Otis Norcross	"
Charles Eliot Norton	Cambridge.
Robert Treat Paine	Boston.
Francis E. Parker	"
Francis Parkman	"
Oliver W. Peabody	"
Henry L. Pierce	"
*John C. Phillips	"
Louis Prang	"
Richard Price	Topsfield.
C. A. L. Richards	Providence.
Henry B. Rogers	Boston.
Stephen Salisbury	Worcester.
Samuel H. Scudder	Cambridge.
Philip H. Sears	Boston.
Mrs. G. Howland Shaw	"
Quincy A. Shaw	"
Mrs. E. A. Shepard	Providence.
Mrs. Jared Sparks	Cambridge.
William Eliot Sparks	Taunton.
Richard Sullivan	Boston.
Royal C. Taft	Providence.
*Isaac Thacher	Boston.
*Clement A. Walker	"
Charles E. Ware	"
Samuel D. Warren	"
William B. Weeden	Providence.
Mrs. Henry Whitman	Boston.
Henry Austin Whitney	"
John Woodbury	"

The Boston Society of Architects.
 The Harvard Art Club, Cambridge.
 The Harvard Philological Society, Cambridge.

Annual Members.

(1885-86.)

Francis E. Abbot	Cambridge.
Mrs. Louis Agassiz	"
Frederic D. Allen	"
William F. Allen	Madison, Wis.
John F. Andrew	Boston.
William Ashburner	San Francisco.
Mrs. Walter Baker	Boston.
Simeon E. Baldwin	New Haven.
Francis Bartlett	Boston.
Mrs. E. H. Bigelow	"
William Sturgis Bigelow	"
Arthur W. Blake	"
Miss Sarah H. Blanchard	"
Charles P. Bowditch	"
Miss Caroline A. Brewer	"
Stephen Bullard	"
Walter C. Cabot	"
Charles F. Choate	Cambridge.
Theodore M. Clark	Boston.
Samuel C. Cobb	"
Alexander Cochrane	"
J. Randolph Coolidge	"
Lady Crossley	Lowestoft, England.
James G. Crosswell	Cambridge.
Henry Davenport	Boston.
Horace Davis	San Francisco.
F. Gordon Dexter	Boston.
Lysander Dickerman	"
E. S. Dixwell	Cambridge.
William Frederick Duff	Boston.

Thomas Durfee	Providence.
Edmund Dwight	Boston.
Louis Dyer	Cambridge.
D. Cady Eaton	New Haven.
Miss Georgiana G. Eaton	Boston.
Mrs. John W. Elliot	"
James C. Fisk	Cambridge.
William H. Forbes	Boston.
Harold N. Fowler	Westfield.
William Gammell	Providence.
John L. Gardner	Boston.
George Z. Gray	Cambridge.
Edward Hale Greenleaf	Boston.
Mrs. James Greenleaf	Cambridge.
Richard C. Greenleaf	Boston.
William W. Greenough	"
Mrs. Henry S. Grew	"
Albert Harkness	Providence.
E. B. Haskell	Boston.
Henry W. Haynes	"
T. Wentworth Higginson	Cambridge.
R. M. Hodges	Boston.
Charles D. Homans	"
Thomas Hooker	New Haven.
Edward W. Hooper	Boston.
Edward Jackson	"
Ernest Jackson	"
John Cone Kimball	"
S. R. Koehler	"
Thomas Lang	"
Amos A. Lawrence	"
James L. Little	"
Henry Cabot Lodge	"
W. P. P. Longfellow	Cambridge.
Charles G. Loring	Boston.
Caleb William Loring	"
Samuel K. Lothrop	"
Augustus Lowell	"

D. G. Lyon	Cambridge.
R. H. Mather	Amherst.
Miss Abby W. May	Boston.
Joseph A. Miller	Providence.
Charles H. Moore	Cambridge.
Miss F. R. Morse	Boston.
Frederick Law Olmsted	Brookline.
James R. Osgood	Boston.
Francis W. Palfrey	”
J. M. Peirce	Cambridge.
Charles C. Perkins	Boston.
William Perkins	”
Henry A. Phillips	”
William T. Piper	Cambridge.
Edward G. Porter	Lexington.
Miss Sarah Porter	Farmington, Conn.
Eleazer Franklin Pratt	Boston.
Waldo S. Pratt	Hartford.
Henry Preble	Cambridge.
Thomas E. Proctor	Boston.
H. H. Richardson	Brookline.
Frederick H. Rindge	Cambridge.
John C. Ropes	Boston.
Denman W. Ross	Cambridge.
Barthold Schlesinger	Boston.
Miss Theodora Sedgwick	Cambridge.
J. B. Sewall	Braintree.
Thomas D. Seymour	New Haven.
Frederick Sheldon	Newport, R. I.
Miss Mary A. Tappan	Lenox.
J. Henry Thayer	Cambridge.
S. Lothrop Thorndike	”
C. H. Toy	”
W. S. Tyler	Amherst.
J. C. Van Benschoten	Middletown, Conn.
Henry Van Brunt	Boston.
George W. Wales	”
Miss M. A. Wales	”

Alfred A. Wheeler	San Francisco.
Edward Wheelwright	Boston.
John Williams White	Cambridge.
William D. Whitney	New Haven.
George Wigglesworth	Boston.
Marshall P. Wilder	”
Robert C. Winthrop	”
J. Huntington Wolcott	”
Theodore D. Woolsey	New Haven.

The Providence Athenæum.



BALTIMORE SOCIETY.

Life Members.

William Alvord	San Francisco.
Basil L. Gildersleeve	Baltimore.
John W. McCoy	”
D. O. Mills	San Francisco.
Clarence B. Moore	Philadelphia.
*Edward Spencer	Baltimore.
D. H. Talbot	Sioux City, Iowa.
Harry Walters	Baltimore.
W. T. Walters	”

Annual Members.

(1885-86.)

William Austin	Charleston, S. C.
D. L. Bartlett	Baltimore.
Mrs. D. L. Bartlett	”
Alexander Bliss	Washington.
Charles J. Bonaparte	Baltimore.
George William Brown	”
Gustav Brühl	Cincinnati.

George William Childs	Philadelphia.
Edward Clark	Washington.
Robert Clarke	Cincinnati.
Joseph H. Coates	Philadelphia.
Mendes Cohen	Baltimore.
Charles C. Converse	Erie, Pa.
J. M. Crow	Grinnell, Iowa.
Julius Dexter	Cincinnati.
John Dunn	Chicago.
Carl Edelheim	Philadelphia.
Arthur M. Elliot	Baltimore.
Alfred Emerson	”
William A. Fisher	”
Arthur L. Frothingham, Jr.	”
Miss Mary E. Garrett	”
Robert Garrett	”
T. Harrison Garrett	”
D. C. Gilman	”
Edward M. Greenway, Jr.	”
Joshua G. Harvey	”
William H. Hawkes	Washington.
Reverdy Johnson	Baltimore.
Miss Elisabeth T. King	”
Henry C. Lea	Philadelphia.
F. W. Lewis	”
Francis C. Macauley	”
N. H. Morison	Baltimore.
Charles D. Morris	”
F. S. Perkins	Burlington, Wis.
B. Perrin	Cleveland, Ohio.
Hermann Schuricht	Chicago.
W. W. Spence	Baltimore.
J. Thomas Stavelly	Philadelphia.
Mrs. Cornelius Stevenson	”
Miss Stevenson	”
S. Teakle Wallis	Baltimore
Minton Warren	”
Miles White, Jr.	”

NEW YORK SOCIETY.

Life Members.

John Jacob Astor	New York.
William E. Dodge	”
James J. Higginson	”
Adrian Iselin	”
John Taylor Johnston	”
Woodbury G. Langdon	”
C. J. Lawrence	”
Allan Marquand	Princeton, N. J.
Henry Marquand	New York.
Henry G. Marquand	”
Daniel Parish, Jr.	”
Frederic J. de Peyster	”
Miss Helen Van Cortlandt de Peyster	”
Henry C. Potter	”
Robert Winthrop	”
Miss Catharine L. Wolfe	”

Annual Members.

(1885-86.)

E. S. Atwood	East Orange, N. J.
Samuel P. Avery	New York.
Charles Babcock	Ithaca.
Charles C. Beaman, Jr.	New York.
Gerard Beekman	”
Mrs. H. C. G. Brandt	Clinton.
George Cary	New York.
M. J. O'Connor	”
Miss Ellen Collins	”
Howard Crosby	”
George William Curtis	West New Brighton, L. I.
Charles P. Daly	New York.

Thomas Davidson	Orange, N. J.
D. Stuart Dodge	New York.
William Dorsheimer	"
Henry Drisler	"
Miss Alice C. Fletcher	"
Edwin L. Godkin	"
William H. Goodyear	"
Henry H. Gorringer	"
W. G. Hale	Ithaca.
James M. Hoppin	New Haven.
Richard M. Hunt	New York.
John B. Ireland	"
Charles Isham	"
John Jay	Katonah.
Edward H. Kendall	New York.
Edward F. de Lancey	"
J. D. Lange	"
Richard H. Lawrence	"
George De Forest Lord	"
Seth Low	Brooklyn.
James B. Ludlow	New York.
Thomas W. Ludlow	Yonkers.
Augustus C. Merriam	New York.
George Norton Miller, Jr.	"
Frank D. Millet	"
R. B. Minturn	"
Samuel L. Parish	"
Henry E. Pellew	"
T. R. Price	"
J. Hampden Robb	"
Julius Sachs	"
Alden Sampson	"
Augustus St. Gaudens	"
Eugene Schuyler	Washington.
Daniel Drake Smith	Englewood, N. J.
Robert Hobart Smith	New York.
Edward A. Spring	Perth Amboy, N. J.
W. J. Stillman	New York.

Richard S. Storrs	Brooklyn.
Charles E. Strong	New York.
Russell Sturgis	”
Frank B. Tarbell	New Haven.
Philip J. J. Valentini	New York.
Edgar B. Van Winkle	”
Charles Waldstein	Cambridge, Eng.
Frank Waller	New York.
Samuel G. Ward	”
William Hayes Ward	”
William R. Ware	”
William R. Warren	”
Harold P. Waterman	”
Horace White	”
Joseph Edeil Winters	”

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

SIXTH ANNUAL REPORT.

To the Members of the Archæological Institute of America :

THE past year has been marked in the history of the Archæological Institute by a radical change in its organization. The motives of this change and the steps in its accomplishment have been known to the members, but it seems desirable to place them upon permanent record in the present Report.

During the past six years the Executive Committee have had frequent reason to note that the national character of the Institute was not so generally recognized as was desirable; and that there was a consequent danger lest the successful accomplishment of its objects should be impeded, and its influence in the promotion of the ends for which it was established become more limited than it ought to be.

Originally founded mainly by the efforts of individuals in Boston and its vicinity, it became apparent, as time went on, that the support it would receive from other quarters was not likely to be such as had been

hoped for, and that, if its national and comprehensive character were to be maintained, means must be devised to engage a warmer concern in its work outside of New England. The progress of interest in archaeological studies in different parts of the country was rapid, and their importance as a branch of liberal education was becoming more fully and intelligently comprehended. There seemed reason to fear lest independent societies might be formed in various places, whose efforts would suffer from lack of union and mutual understanding and support.

In view of these facts, which were presented to the Institute by the Executive Committee at the last annual meeting, a special committee was appointed to take the matter into consideration, and to report a scheme for the reorganization of the Institute upon such a plan as might seem best fitted to meet these dangers and needs. After careful deliberation such a scheme was devised, and was adopted by the Institute at a meeting held in the autumn of last year. The new form of organization appears in the Regulations that precede this Report.

Under it three affiliated societies now exist,—that of Boston, the mother society, that of Baltimore, and that of New York; and the list of their officers and members is also to be found on the preceding pages. Societies in other places, it may be hoped, will from time to time affiliate themselves with the Institute under the present system. It is to be observed that,

while a large measure of independent action is left to each society, they are all so united as to secure common action in matters of importance, and to afford mutual support in the promotion of their common interests. The basis of the Institute is thus broadened, the conduct of its affairs is placed in the hands of officers chosen from its different branches, and all ground of indifference to it as an institution of narrow local concern is removed. Whether the hope of extended usefulness which has been the ruling motive in this change of organization be fulfilled or not, there can be no question as to the desirableness of the experiment.

THE work accomplished by the Institute, during the somewhat more than five years of its existence under its original Regulations, has been such as well may afford satisfaction to its founders and its original members, and may serve to set a standard for future effort.

In the first circular issued by the Executive Committee, six years ago, with the intention of making as widely known as possible the objects for which the Institute had been formed, it was stated that "it hopes by its work to promote an acquaintance with the pre-historic antiquities of our country." How much this work was needed is clearly shown by a remark to be found in their First Annual Report, of the following year, that "a comprehensive survey of the

antiquities of America and a scientific classification of them are still lacking." Indeed, in an essay accompanying the same Report, the late Hon. Lewis H. Morgan, whose eminent authority in ethnological and archæological studies is generally recognized, declared that "American archæology is in such a low condition that we scarcely have such a science among us." Happily, something has been done to remove this reproach; and of the various influences that have contributed to bring about the improvement, no small share is due to the explorations and studies that have been promoted by this society.

The Institute was fortunate in securing at the outset Mr. Morgan's advice and assistance. In his opinion the most promising field for exploration in this country was that of the social organization, usages, and customs of the present Pueblo tribes of Indians, and of the architectural character of the structures now occupied by them. With the light thus gained, he thought a careful exploration and survey should be attempted of the numerous remains of similar structures still to be found, especially in the San Juan region, near the point where Colorado, Utah, New Mexico, and Arizona join;¹ and in other

¹ This is the spot which Mr. Morgan regarded as the probable place of origin of the ancient Mexicans. See a valuable paper read at the St. Louis meeting of the American Association for the Advancement of Science, in 1878, and reproduced in the Twelfth Annual Report of the Trustees of the Peabody Museum, entitled "On the Ruins of a Stone Pueblo on the Animas River in New Mexico."

parts of New Mexico and Arizona. He drew up an elaborate scheme of the methods under which, in his judgment, such an exploration should be prosecuted, and suggested that it should be subsequently extended so as to comprise a complete survey of the more imposing ruins still existing in Mexico, Central America, and Yucatan.

Nor was this all: Mr. Morgan contributed to our First Annual Report an important "Study of the Houses of the American Aborigines," forming a substantial portion of the unpublished fifth part of his great work on "Ancient Society," and supplementing the interesting articles, previously contributed by him to the *North American Review*, on "Indian Migrations," "The Houses of the Mound-Builders," "The Seven Cities of Cibola," and "Montezuma's Dinner." This paper, thus supplied to us, was afterwards reproduced, with some slight alterations, by Major J. W. Powell as Vol. IV. of "Contributions to North American Ethnology," under the title of "Houses and House-Life of the American Aborigines." It is characterized by this gentleman, the head of the Bureau of Ethnology attached to the Smithsonian Institution, as "of the highest value in correcting errors and exaggerations still prevalent, in removing the misconceptions and erroneous interpretations encumbering the original records made by incompetent observers, and in directing further research on philosophic principles."

The substance of Mr. Morgan's argument is, that

all the native tribes of America were of one common stock; that their institutions, usages, and customs were similar; and that all the various ruined structures to be found on this continent can be explained by the analogies of the existing communal buildings of New Mexico. Springing from a common mind, these exhibit only different stages of development, and form one system of works, from the Long House of the Iroquois to the Joint-Tenement stone structures of the Aztecs and the Mayas. At the epoch of European discovery tribes were found to be living on this continent in two well-marked ethnical periods, the Older Period of Barbarism, represented by the Iroquois, and the Middle Period, the stage of the ancient Mexicans; but no tribe had reached the Later Period of Barbarism, which immediately precedes civilization.

Your Committee, appreciating the importance of these views, and holding the opinion that "the study of the aboriginal life in America is essential to complete the history of the human race, as well as to gratify a legitimate curiosity concerning the condition of man on this continent previous to its discovery, four hundred years ago," sought for an agent "properly qualified by character and education" for the investigation of this interesting problem.

The next year they were able to report that they had secured for this work the services of Mr. Adolph F. Bandelier, of Highland, Illinois. In his able essays, "On the Art of War and Mode of Warfare of the An-

cient Mexicans"; "On the Distribution and Tenure of Lands and the Customs with respect to Inheritance among the Ancient Mexicans"; and "On the Social Organization and Mode of Government of the Ancient Mexicans,"—published in the Annual Reports of the Peabody Museum of American Archæology and Ethnology, at Cambridge, for the years 1877-1880,—essays marked by sound judgment and correct methods of historical interpretation, he had shown a minute and familiar acquaintance with the existing sources of information concerning the condition of the native races at the time of the Spanish Conquest. Thoroughly equipped in this respect, and possessing a knowledge of several European languages, and a fondness for linguistic studies which qualified him for the ready acquisition of native dialects, he had also the advantage of an enthusiastic devotion to his favorite studies, a readiness to endure any hardship in their pursuit, and a capacity for adapting himself to any necessity.

In August, 1880, Mr. Bandelier set out for New Mexico, and proceeded to make a most careful study of the great ruined Pueblo situated on the Rio Pecos, an affluent of the Rio Grande, about thirty miles southeast of Santa Fé. His "Report on the Ruins of the Pueblo of Pecos," preceded by "An Historical Introduction to Studies among the Sedentary Indians of New Mexico," was published by the Institute early in the following year, and makes a volume of one hundred and thirty-three pages, illustrated by eleven

plates. Pecos was proved to be the famous Pueblo, called by the Spaniards "Cicuye," first visited in the autumn of 1541 by Alvarado, the lieutenant of Coronado, in the course of the romantic expedition in search of "the Seven Cities of Cibola." Upon a comparison of his own careful measurements of all its parts with those given by Mr. Morgan and Dr. Jackson of buildings situated in localities farther north, but identical in plan, structure, and material, Mr. Bandelier comes to the conclusion that this is "probably the largest aboriginal structure of stone within the United States, so far described." He estimates the number of compartments contained in it as amounting to five hundred and eighty-five, and says that for size it will bear comparison with many of the ruins of Mexico and Central America. A minute and thorough description of the structure is given, and the archaeological discoveries that in any way bear upon it are detailed in full. The history of the Pueblo is outlined from the first description given by Castañeda, the chronicler of Coronado's march, and the narrative of Espejo, who visited it forty years later, down through the period of its conquest by Oñate, in 1597, to the revolt of the Pecos from the Spanish rule, in 1680, their reconquest, and the final abandonment of the Pueblo, in 1840.

In 1883 a second edition of Mr. Bandelier's Pecos Report was published, in response to a demand that had come for it from Santa Fé on the occasion of

the celebration, proposed to be held during the summer of that year, of the supposed three hundred and thirty-third anniversary of the foundation of that city. It was regarded as the best possible guide for the many strangers who were expected there, for studying the history and understanding the character of the remains of the most noted of the ruined structures to be found in the vicinity of Santa Fé.

The other paper in the same volume is a very thorough and accurate essay upon the original sources of Spanish-American history, embracing a careful analysis of the various itineraries of the first explorers and missionaries, in which is to be found the earliest mention of the different inhabited Pueblos, together with notes supplying a complete bibliography of the subject. Mr. Bandelier believes that his discussion has proved the truthfulness of the chroniclers of Coronado's expedition, and established the superior advantages of New Mexico as a field for ethnological and archæological investigation. There can be no doubt that the Committee was correct "in regarding this volume as a highly valuable contribution to the knowledge of American antiquities and history."

After completing this work, early in October, 1880, Mr. Bandelier visited the important group of inhabited Pueblos situated in the valley of the Rio Grande, about thirty miles to the west of Santa Fé. Here, in the Pueblo of Cochití, inhabited by a branch of the Queres stock, he spent two months; and, having been

adopted into the tribe, he lived with them upon terms of complete familiarity and unusual confidence. An account of some of the information thus acquired by him in regard to their social organization, customs, traditions, and religious beliefs was given in the Committee's Second Annual Report, which contains a notice of his curious discovery of two life-sized stone figures of the Puma, still worshipped by the Queres as the idol of "Shyayag," their God of the Chase.

In the latter part of December, 1880, Mr. Bandelier returned home for a vacation, and, as the Committee had entered into an arrangement with Mr. Lorillard to send a competent explorer to accompany M. Charnay in his travels in Mexico and Central America, it was thought best to interrupt for the moment Mr. Bandelier's studies in New Mexico, and to despatch him to Mexico, where he arrived early in March, 1881, and remained till the autumn. In the Third Annual Report, for 1882, a partial analysis was given of the long and interesting Report which Mr. Bandelier prepared upon his return, mainly relating to what had been accomplished by him at Cholula and Mitla, two of the most important sites of ancient semi-civilization in that country. The publication of this Report was, however, delayed until last year, when it appeared in a handsome volume of three hundred and twenty-six pages, illustrated by twenty-seven plates. This, too, is a real "contribution to the knowledge of American antiquities and history."

Mr. Bandelier's rare knowledge of the early Spanish authorities, combined with his acquaintance with the remains of Indian antiquity in neighboring regions, as well as with existing Indian life, has enabled him to throw near light upon many dark questions in respect to Mexican history, tradition, mythology, and customs. His account of the famous pyramid of Cholula and the "palaces" of Mitla is full, accurate, and interesting, and brings these noted buildings out of the realm of marvel and error into the domain of simple truth. His archæological studies proper have had the result of signally confirming Mr. Morgan's opinions in regard to the architectural methods practised under the quasi-civilization of the ancient Aztecs. The great "pyramid," or rather mound, of Cholula is shown to have been "not originally constructed upon the plan which it now appears to have, but to have grown in the course of time according to necessity. This would account for its enormous size without resorting to the supposition of extravagant numbers of population; and would tend to show also, that, while it was the product of communal labor, it was built for some purpose of public utility, and not to benefit private interests, or as a token of respect for the memory of individuals." (p. 248.) "The structure accordingly presents itself as the base of an artificially elevated, and therefore, according to Indian military art, a fortified pueblo." (p. 253.) "The so-called 'palaces' of Mitla, built without the knowledge of mechanical

contrivances, ornamented by mere 'rule of thumb,' imperfectly ventilated, and correspondingly dark, appear only as the barbaric effort of a barbarous people." (p. 307.)

After his return from Mexico, in the following spring, 1882, Mr. Bandelier went back to New Mexico to resume his studies and explorations there. The results are given in his report upon his "Investigations in New Mexico in the Spring and Summer of 1882," published in the first Bulletin of the Archæological Institute, for January, 1883. This is a valuable work for the light it sheds upon the ethnology and condition of the country at the time of Coronado's expedition, and on the languages, the social condition and the religious beliefs of the different tribes. Some of the author's conclusions are novel and surprising, as, for example, his estimate that the population dwelling at that period in many-storied buildings did not exceed 30,000, and that the great number of ruins now existing is proof, not of simultaneous, but of successive occupation, and does not imply a large population at any one time. The ruins antedating the sixteenth century he divides into four classes:—1st. Cave-dwellings; 2d. Cliff-houses; 3d. One-story buildings of stone, forming scattered villages; and 4th. Large houses with retreating stories. Of these he regards the cave-dwellings and the many-storied joint-tenement houses as most directly connected. He thinks that there are in fact only two types of aboriginal archi-

ecture in New Mexico,—the many-storied communal house, and the one-story stone buildings grouped into villages. So long as the small-house architecture had not been noticed in New Mexico, the aboriginal dwellings existing there appeared to be totally disconnected from those found farther south. Before attempting to trace the connection, if any, which exists between them, Mr. Bandelier next undertook to explore the region east of the Rio Grande, formerly inhabited by the Jumanos, and in which lie the celebrated ruins at Gran Quivira. A full account of this journey, as well as two reports by Mr. Bandelier upon his "Investigations in New Mexico in 1883-84," illustrated by a map, were given in our last Annual Report, which was principally devoted to the subject of American antiquities.

Two works by Mr. Bandelier, which are essential to a complete understanding of what has been already accomplished for the scientific investigation of American antiquities, still remain for the society to publish.

The first is the concluding portion of his "Historical Introduction to Studies among the Sedentary Indians of New Mexico." This comprises an account of the narratives of the different expeditions into that region up to the beginning of the seventeenth century, with a discussion of the routes followed, and an attempt to identify the localities visited, especially by Espejo and Oñate. It will also be necessary to print

a complete report of his final explorations in Northern Mexico, from the point where our last Annual Report left him, in March, 1884, in the valley of the Sonora. This will prove to be quite as interesting as any previous report, as his route lay through a region almost unknown on account of the terror inspired by the Apaches, and brought him over the Sierra Madre to the remarkable remains of the Casas Grandes, near Janos, in the State of Chihuahua.¹ Of these there is no existing adequate account, and Mr. Bandelier's complete plans, with their explanation not only of the house architecture, but of the military construction and of the system of irrigation and of the trails of the tribes, ought not to be lost to the world.

Both of these unpublished documents are indispensable to our knowledge of the topography, and to our understanding of the accounts of the first explorers of a portion of our own country, since Mr. Bandelier is the only competent explorer who has ever travelled over the routes that must of necessity have been followed. Inasmuch as so large a proportion of what the society has already expended upon the investigation of American antiquities has gone to defray the expenses of these very journeyings, it would seem unreasonable that the results thus acquired should be lost to science.

¹ A map of N. E. Sonora and N. W. Chihuahua has been published by the U. S. War Department, compiled from information derived from these last explorations of Mr. Bandelier.

WHILE the work described in the preceding statement has been done by the Institute in America, work still more brilliant in result and still more striking in character has been accomplished in the Old World. There is no need to recount the story of the expedition to Assos, and of the investigations carried on at that site for somewhat more than three years. It has been fully set forth in preceding Annual Reports, and in the instructive Report on the Investigations at Assos in 1881, by Mr. Clarke. Mr. Clarke is now engaged in preparing the Report of the work done in 1882-83. Owing to the wide range and novel results of the investigations of these years, the labor of preparation of this Report is great; but a large portion, if not the whole of it, will probably be ready for the press in the course of the present year.

The publication of this Report must be awaited before the full value of the work of the Institute at Assos can be duly estimated. It may be safely asserted, however, that it will prove to be one of the most important contributions made during the present century to the knowledge of civic Greek antiquity. Assos has been explored and recovered as no other Greek city has been. The restoration of its famous temple, a monument of the highest interest in the history of Doric architecture, is but one, and perhaps not the most considerable, of the results of the expedition. The recovery of the main civic buildings of the ancient city is of more novel and various interest.

Nothing like them has heretofore been known and described. The complete and exact restoration of them secured by the labor and skill of Mr. Clarke, Mr. Bacon, and Mr. Koldewey, was made possible by those peculiar local and historic conditions of Assos which first determined the choice of the site for exploration; and the knowledge which has been gained of them makes an increase of unexpected amount to the stock of information concerning the public edifices of a Greek city, and the modes of life of its inhabitants. For while it affords unprecedented illustration of the principles of Greek architecture as applied to buildings of different descriptions, in modifications of style, in methods of construction, in distribution of plan, and in the relations of contiguous edifices, it also contributes largely to more precise acquaintance with the customs, occupations, and interests of the people for whose needs and pleasures these buildings were erected.

The desire that America might accomplish a piece of work of some significance in the domain of classical archæology has been satisfied, and the outlay upon the expedition has been justified by these results. What this outlay has amounted to in money may be seen from the abstract appended to this Report of the income and expenditure of the Institute during the past six years.

In the course of the last autumn the sum of five thousand dollars was provided, by the liberality of a

member of the Institute, to be used under the direction of a special committee of the Institute for an expedition to Babylonia, under the charge of Dr. W. H. Ward, of New York. The expedition was to be of the nature of a brief reconnoissance, in the hope of determining a favorable site for future thorough investigation. Dr. Ward was joined in the East by Dr. Sterrett, and by Mr. Haynes as the photographer of the party. Dr. Sterrett's health unfortunately broke down, and he was obliged to leave the party at Bagdad. No report for publication has yet been received of the route or observations of Dr. Ward.

The whole Mesopotamian region becomes from year to year, with the rapid advance in knowledge of Assyrian antiquity, of more and more importance as a field of archæological investigation. Many sites of interest have been determined, but remain as yet unexplored by science. Many gaps in knowledge are still to be filled; and what has already been acquired indicates that a vast amount still remains to be gained, before the earth will have rendered up the full record of the past which has been preserved within its sheltering bosom. The relations of the civilization of this region to that of Egypt, of the Asiatic shores of the Mediterranean, and of Greece, are gradually becoming better understood than of old; and the limits in this direction of the history of the intellectual life of man are being gradually extended and defined. It is desirable that the Institute should bear its part in

the long and interesting work that still needs to be done in the lands bordering upon the Tigris and the Euphrates; and it is earnestly to be hoped that the expedition of this year may be but the precursor of one thoroughly equipped for purposes of prolonged investigation.

The Fourth Annual Report of the School of Classical Studies at Athens, which should accompany the present Report, has been unavoidably delayed. It will be presented independently to the members of the Institute in the course of a few weeks. The Committee on the School have had the gratification, during the past year, of being able to announce that a site for a permanent building for the School, in a very favorable position, has been offered to it by the Greek government. The matter will be presented fully in the Committee's Report, but it deserves special notice in this Report of the Council of the Institute, as an event of marked interest in the history of the School. The action of the Greek government demands the grateful acknowledgment of the Institute, and at the same time imposes upon it an obligation to see that every effort is made to take advantage of its liberal and honorable offer. The erection of a permanent and fitting home for the School would give to it at once a character and a position in Athens which it must lack so long as its abode is not its own, and is liable to change. The cost of such a building is estimated at from \$15,000 to \$20,000, and the interest on

this sum would not be more than the amount now paid for rent, while the expense and trouble and the dilapidation of its property consequent upon occasional removals would be altogether avoided. The steady growth of the library of the School affords a strong motive for securing a safe and suitable lodgment for it. We are now engaged in laying the foundations of an institution that is intended for the service of future generations as well as of our own, and of which the importance and influence are likely to increase with time.

It is for the interest of students in every branch of knowledge that the highest standard attainable in each should be maintained by those engaged in it. The School at Athens is an essential complement of our university system of classical education. The opportunities of American students to pursue advanced classical studies, and to engage in original research, can be placed only by its means upon a level with those enjoyed by the students of Europe. The archæology and art of Greece must be studied in Greece itself, if their study is to exercise its full effect in the discipline of the higher intellectual faculties, and in the cultivation of a just appreciation of the masterpieces, artistic and literary, of antiquity. The lessons which Greece, and Greece alone, has to teach the modern world, can never lose their importance; for they afford, by works as nearly faultless in their kind as the world has seen, a permanent measure of the best

human achievement, and they supply an inexhaustible source of elevating and ennobling instruction and delight.

The Committee on the School have already had the satisfaction of receiving one donation of three thousand dollars, and several smaller donations toward the sum required for building. The School is the child of the Institute, and the Council accordingly appeal unhesitatingly and earnestly to the individual members of the Institute to assist in making up the needed amount by their own contributions, and by soliciting from friends of the undertaking in the community at large such assistance as is never refused to works fitted to promote the interests of education.

The Council desire to commend to the support of the members of the Institute the "American Journal of Archæology," of which the first number has recently appeared, and which has already enlisted the interest of scholars in our own country and abroad. This Journal promises to supply the long felt need of a full and accurate record of the progress of archæological investigation and discovery in all parts of the world, and to contribute to the advance of the science by original discussions of topics of interest.

It is the hope of the Council that, by addition to the membership as well as to the number of the affiliated societies of the Institute, the means for the accomplishment of new work may be secured. A vast field of work lies open before us, by the cultivation of

which knowledge of the past may be increased, the collections for public instruction in our museums enlarged, and the resources of the intellectual life of the community be made more various and attractive.

CHARLES ELIOT NORTON, *President.*

HENRY DRISLER, *Vice-President.*

FRANCIS PARKMAN.

WILLIAM W. GOODWIN.

STEPHEN SALISBURY.

HENRY W. HAYNES.

FREDERIC J. DE PEYSTER.

RUSSELL STURGIS.

A. L. FROTHINGHAM, JR.

ALFRED EMERSON.

*Council, from November, 1884, to
May, 1885.*

*Abstract of Accounts of the Archæological Institute of America,
May, 1879, to May, 1885.*

RECEIPTS.

Annual Assessments, 1879-1885	\$10,575.20
Life Memberships	8,100.00
Donations unconditioned	12,190.40
Donations for American Work	3,285.75
Donations for Classical Work	6,836.83
Donation for Tigris and Euphrates (preliminary) Expedition	5,000.00
Interest	341.55
Income from sale of publications	358.57
	<hr/>
	\$46,688.30

EXPENSES.

American Investigations	\$9,848.63
Printing Reports of do.	2,300.84
Assos Expedition	22,193.76
Printing Report of do.	1,324.95
Tigris and Euphrates (preliminary) Expedition	5,000.00
Printing of Annual Reports, Bulletin, etc., etc.	2,145.59
Expenses (Salary of Secretary, Postage, Advertising, etc., etc.)	2,504.94
Sundries (Crete, \$542; Papers of School at Athens, \$250; Interest and other minor items, \$48.50)	840.50
	<hr/>
	\$46,159.21
Balance in Bank, May 1st, 1885	\$529.09

Manuscript

Archæological Institute of America.

SEVENTH ANNUAL REPORT.

1885-86.

PRESENTED AT THE ANNUAL MEETING OF THE
COUNCIL OF THE INSTITUTE,

BOSTON, MAY 8, 1886.



CAMBRIDGE:
JOHN WILSON AND SON.

University Press.

1886.

Archæological Institute of America.



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CONTENTS.



COUNCIL	5
OFFICERS OF LOCAL SOCIETIES	7
LIST OF MEMBERS: — FOREIGN HONORARY MEMBERS	9
BOSTON SOCIETY	10
BALTIMORE SOCIETY	16
NEW YORK SOCIETY	18
TRUSTEES OF THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT	
ATHENS	23
REGULATIONS	25
REPORT OF THE COUNCIL FOR 1885-86	33

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ARCHÆOLOGICAL INSTITUTE OF AMERICA.

Council, 1886-87.

CHARLES ELIOT NORTON, CAMBRIDGE, *President.*

HENRY DRISLER, NEW YORK, *Vice-President.*

MARTIN BRIMMER, BOSTON.

WILLIAM W. GOODWIN, CAMBRIDGE.

FRANCIS PARKMAN, BOSTON.

FREDERICK J. DE PEYSTER, NEW YORK.

RUSSELL STURGIS, NEW YORK.

JOSEPH W. HARPER, JR., NEW YORK.

ALLAN MARQUAND, PRINCETON.

MENDES COHEN, BALTIMORE.

ARTHUR L. FROTHINGHAM, JR., BALTIMORE.

Treasurer.

GEORGE WIGGLESWORTH,

8 CONGRESS STREET, BOSTON.

Secretary.

ARTHUR L. FROTHINGHAM, JR.,

29 CATHEDRAL STREET, BALTIMORE.

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OFFICERS OF LOCAL SOCIETIES.

BOSTON SOCIETY.

Executive Committee.

(1886-87.)

CHARLES ELIOT NORTON, *President.*
MARTIN BRIMMER, *Vice-President.*
FRANCIS PARKMAN.
W. W. GOODWIN.
H. W. HAYNES.
STEPHEN SALISBURY.
PHILIP H. SEARS.
GEORGE WIGGLESWORTH, *Treasurer.*
E. H. GREENLEAF, *Secretary.*

BALTIMORE SOCIETY.

(1886-87.)

President.

REVERDY JOHNSON.

Vice-Presidents.

D. L. BARTLETT.
BASIL L. GILDERSLEEVE.
D. C. GILMAN.
JOHN W. McCOY.
HENRY C. LEA.

Secretary.

ARTHUR L. FROTHINGHAM, JR.

NEW YORK SOCIETY.

(1886-87.)

President.

FREDERICK J. DE PEYSTER.

Vice-Presidents.

HENRY C. POTTER.

CHARLES P. DALY.

HOWARD CROSBY.

HENRY G. MARQUAND.

Treasurer.

ROBERT HOBART SMITH.

Secretary.

WILLIAM R. WARE.

Committee on Membership.

EDWARD F. DE LANCEY.

S. G. WARD.

EDWARD H. KENDALL.

AUGUSTUS C. MERRIAM.

ALLAN MARQUAND.

JAMES B. LUDLOW.

LIST OF MEMBERS

OF THE

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

FOREIGN HONORARY MEMBERS.¹

HEINRICH BRUNN	Munich.
ALEXANDER CONZE	Berlin.
ERNST CURTIUS	Berlin.
GEORGE DENNIS	Smyrna.
KARL HUMANN	Smyrna.
G. C. C. MASPERO	Cairo.
THEODOR MOMMSEN	Berlin.
C. T. NEWTON	London.
G. B. DE ROSSI	Rome.
W. H. WADDINGTON	Paris.

¹ The number of Foreign Honorary Members is limited by vote of the Council to ten.

BOSTON SOCIETY.

Life Members.

Alexander Agassiz	Cambridge.
Frederick L. Ames	Boston.
William Amory	"
*Thomas G. Appleton	"
Elisha Atkins	"
Francis H. Bacon	"
Joseph T. Bailey	"
Adolph F. Bandelier	Highland, Ill.
E. Pierson Beebe	Boston.
Stanton Blake	"
J. Ingersoll Bowditch	"
Charles S. Bradley	Providence.
George L. Bradley	Pomfret Centre, Conn.
John L. Bremer	Boston.
Mrs. Gardner Brewer	"
Martin Brimmer	"
Mrs. Martin Brimmer	"
William S. Bullard	"
Arthur Astor Carey	Cambridge.
George B. Chase	Boston.
Joseph Thacher Clarke	"
Thomas M. Clarke	Providence.
George H. Corliss	"
G. W. W. Dove	Andover.
William Endicott, Jr.	Boston.
Dana Estes	"
*Glendower Evans	"
*Charles Fairchild	"
Ezra Farnsworth	"

* Deceased.

John M. Forbes	Boston.
Manning F. Force	Cincinnati.
William W. Goodwin	Cambridge.
Horace Gray	Washington.
Russell Gray	Boston.
Samuel A. Green	"
E. W. Gurney	Cambridge.
N. P. Hallowell	Boston.
Rowland Hazard	Peace Dale, R. I.
Mrs. Augustus Hemenway	Boston.
George Higginson	"
Henry L. Higginson	"
*Miss Alice S. Hooper	"
*Mrs. Samuel Hooper	"
E. N. Horsford	Cambridge.
James F. Hunnewell	Charlestown.
Samuel Johnson	Boston.
*Henry P. Kidder	"
Gardiner M. Lane	"
Henry Lee	"
Thornton K. Lothrop	"
John Lowell	"
Miss Ellen F. Mason	"
Miss Ida N. Mason	"
*Otis Norcross	"
Charles Eliot Norton	Cambridge.
Robert Treat Paine	Boston.
*Francis E. Parker	"
Francis Parkman	"
Oliver W. Peabody	"
Henry L. Pierce	"
*John C. Phillips	"
Louis Prang	"
Richard Price	Topsfield.
C. A. L. Richards	Providence.

Henry B. Rogers	Boston.
Stephen Salisbury	Worcester.
Samuel H. Scudder	Cambridge.
Philip H. Sears	Boston.
Mrs. G. Howland Shaw	”
Quincy A. Shaw	”
Mrs. E. A. Shepard	Providence.
Mrs. Jared Sparks	Cambridge.
William Eliot Sparks	Taunton.
Richard Sullivan	Boston.
Royal C. Taft	Providence.
*Isaac Thacher	Boston.
*Clement A. Walker	”
Charles E. Ware	”
Samuel D. Warren	”
William B. Weeden	Providence.
William F. Weld	Boston.
Mrs. Henry Whitman	”
Henry Austin Whitney	”
John Woodbury	”

The Boston Society of Architects.

The Harvard Art Club, Cambridge.

The Harvard Philological Society, Cambridge.

87—11

Annual Members.

(1886-87.)

Francis E. Abbot	Cambridge.
Mrs. Louis Agassiz	”
Frederic D. Allen	”
William F. Allen	Madison, Wis.
John F. Andrew	Boston.
George A. Armour	Chicago.
William Ashburner	San Francisco.

Mrs. Walter Baker	Boston.
Francis Bartlett	"
Mrs. E. H. Bigelow	"
William Sturgis Bigelow	"
Arthur W. Blake	"
Miss Sarah H. Blanchard	"
Charles P. Bowditch	"
Miss Caroline A. Brewer	"
Stephen Bullard	"
Walter C. Cabot	"
Charles F. Choate	Cambridge.
Samuel C. Cobb	Boston.
Alexander Cochrane	"
Lady Crossley	Lowestoft, England.
James G. Croswell	Cambridge.
Henry Davenport	Boston.
Horace Davis	San Francisco.
F. Gordon Dexter	Boston.
Lysander Dickerman	"
E. S. Dixwell	Cambridge.
William Frederick Duff	Boston.
Thomas Durfee	Providence.
Edmund Dwight	Boston.
Louis Dyer	Cambridge.
D. Cady Eaton	New Haven.
Miss Georgiana G. Eaton	Boston.
Mrs. John W. Elliot	"
William H. Forbes	Boston.
Harold N. Fowler	Cambridge.
William Gammell	Providence.
John L. Gardner	Boston.
George Z. Gray	Cambridge.
Edward Hale Greenleaf	Boston.
Mrs. James Greenleaf	Cambridge.
Richard C. Greenleaf	Boston.

William W. Greenough	Boston.
Mrs. Henry S. Grew	”
Albert Harkness	Providence.
E. B. Haskell	Boston.
Henry W. Haynes	”
T. Wentworth Higginson	Cambridge.
R. M. Hodges	Boston.
Charles D. Homans	”
Thomas Hooker	New Haven.
Edward W. Hooper	Boston.
Edward Jackson	”
Ernest Jackson	”
S. R. Koehler	”
Thomas Lang	”
Amos A. Lawrence	”
James L. Little	”
Henry Cabot Lodge	”
W. P. P. Longfellow	”
Charles G. Loring	”
Caleb William Loring	”
Samuel K. Lothrop	”
D. G. Lyon	Cambridge.
R. H. Mather	Amherst.
Miss Abby W. May	Boston.
Joseph A. Miller	Providence.
Charles H. Moore	Cambridge.
Miss F. R. Morse	Boston.
Frederick Law Olmsted	Brookline.
Francis W. Palfrey	Boston.
Charles C. Perkins	”
William Perkins	”
Henry A. Phillips	”
William T. Piper	Cambridge.
Edward G. Porter	Lexington.
Miss Sarah Porter	Farmington, Conn.

Eleazer Franklin Pratt	Boston.
Waldo S. Pratt	Hartford.
Henry Preble	Cambridge.
Thomas E. Proctor	Boston.
Frederick H. Rindge	Cambridge.
John C. Ropes	Boston.
Denman W. Ross	Cambridge.
Barthold Schlesinger	Boston.
Miss Theodora Sedgwick	Cambridge.
J. B. Sewall	South Braintree.
Thomas D. Seymour	New Haven.
Frederick Sheldon	Newport, R. I.
Miss Mary A. Tappan	Lenox.
J. Henry Thayer	Cambridge.
S. Lothrop Thorndike	"
C. H. Toy	"
W. S. Tyler	Amherst.
Henry Van Brunt	Boston.
George W. Wales	"
Miss M. A. Wales	"
Alfred A. Wheeler	San Francisco.
Edward Wheelwright	Boston.
John Williams White	Cambridge.
William D. Whitney	New Haven.
George Wigglesworth	Boston.
Marshall P. Wilder	"
William C. Winslow	"
Robert C. Winthrop	"
J. Huntington Wolcott	"
Theodore D. Woolsey	New Haven.

The Providence Athenæum.

BALTIMORE SOCIETY.

Life Members.

William Alvord	San Francisco.
Basil L. Gildersleeve	Baltimore.
John W. McCoy	"
D. O. Mills	San Francisco.
Clarence B. Moore	Philadelphia.
*Edward Spencer	Baltimore.
D. H. Talbot	Sioux City, Iowa.
Harry Walters	Baltimore.
W. T. Walters	"

9—1

Annual Members.

(1886-87.)

William Austin	Charleston, S. C.
D. L. Bartlett	Baltimore.
Mrs. D. L. Bartlett	"
Alexander Bliss	Washington.
Charles J. Bonaparte	Baltimore.
Isaac Brooks, Jr.	"
George William Brown	"
Gustav Brühl	Cincinnati.
George William Childs	Philadelphia.
Edward Clark	Washington.
Joseph H. Coates	Philadelphia.
Mendes Cohen	Baltimore.
Charles C. Converse	Erie, Pa.
J. M. Crow	Grinnell, Iowa.
Julius Dexter	Cincinnati.
John Dunn	Chicago.

Carl Edelheim	Philadelphia.
Arthur M. Elliot	Baltimore.
Alfred Emerson	”
William A. Fisher	”
Arthur L. Frothingham, Jr.	”
Miss Mary E. Garrett	”
Robert Garrett	”
T. Harrison Garrett	”
D. C. Gilman	”
Edward M. Greenway, Jr.	”
Joshua G. Harvey	”
William H. Hawkes	Washington.
Reverdy Johnson	Baltimore.
Miss Elisabeth T. King	”
Henry C. Lea	Philadelphia.
F. W. Lewis	”
Francis C. Macauley	”
N. H. Morison	Baltimore.
F. S. Perkins	Burlington, Wis.
B. Perrin	Cleveland, Ohio.
Hermann Schuricht	Chicago.
W. W. Spence	Baltimore.
J. Thomas Stavelly	Philadelphia.
Mrs. Cornelius Stevenson	”
Miss Stevenson	”
S. Teackle Wallis	Baltimore.
Minton Warren	”
Miles White, Jr.	”

NEW YORK SOCIETY.

Life Members.

John Jacob Astor	New York.
Addison Brown	"
William E. Dodge	"
Thomas Hickley	Philadelphia.
James J. Higginson	New York.
Adrian Iselin	"
John Taylor Johnston	"
Woodbury G. Langdon	"
C. J. Lawrence	"
R. H. Lawrence	"
Allan Marquand	Princeton, N. J.
Henry Marquand	New York.
Henry G. Marquand	"
Daniel E. Parish, Jr.	"
Frederick J. de Peyster	"
Miss Helen Van Cortland de Peyster	"
Henry C. Potter	"
Spencer Trask	Brooklyn.
Robert Winthrop	New York.
Miss Catharine L. Wolfe	"

20

Annual Members.

(1886-87.)

William Loring Andrews	New York.
Daniel S. Appleton	"
Sidney G. Ashmore	Schenectady.
E. S. Atwood	East Orange, N. J.
Samuel P. Avery	New York.
Charles Babcock	Ithaca.

John S. Battell	New York.
Charles C. Beaman, Jr.	"
J. T. Beckwith	Hartford, Conn.
Gerard Beekman	New York.
William B. Bigelow	"
George Bliss	"
William M. Bliss	"
Mrs. William T. Blodgett	"
A. J. Bloor	"
Mrs. H. C. G. Brandt	Clinton.
Samuel Brearley, Jr.	New York.
Arthur Brooks	"
Frederick T. Brown	"
John E. Burrill	"
George Cary	Buffalo.
D. H. Chamberlain	New York.
Joseph H. Choate	"
Charles Collins	"
Miss Ellen Collins	"
Robert Collyer	"
Clarence R. Conger	"
M. J. O'Connor	"
S. W. Crawford	"
Howard Crosby	"
George William Curtis	West New Brighton, S. I.
Arthur H. Cutler	New York.
Charles P. Daly	"
Thomas Davidson	Orange, N. J.
D. Stuart Dodge	New York.
William Dorsheimer	"
Henry Drisler	"
Loyall Farragut	"
Benjamin H. Field	"
Hamilton Fish	"
Miss Alice C. Fletcher	"

R. P. Flower	New York.
Clarence M. Fowler	"
Miss Julia Gibbons	"
Richard W. Gilder	"
Edwin L. Godkin	"
Parke Godwin	"
William H. Goodyear	"
Irving Grinnell	New Hamburg.
William Henry Gunther	New York.
Walter S. Gurnee	"
W. G. Hale	Ithaca.
Joseph W. Harper, Jr.	New York.
O. P. Hatfield	"
Robert Hoe	"
E. A. Hoffman	"
James M. Hoppin	New Haven, Conn.
Richard M. Hunt	New York.
John B. Ireland	"
Charles Isham	"
John Jay	Katonah.
Morris K. Jesup	New York.
A. D. L. Jewett	"
John D. Jones	"
Edward Kemp	"
Edward H. Kendall	"
John S. Kennedy	"
William Krebs	"
R. H. Lamborn	"
Edward F. de Lancey	"
J. D. Lange	"
Pierre L. Le Brun	"
George de Forest Lord	"
Pierre Lorillard	"
A. A. Low	Brooklyn.
A. Augustus Low	"

Seth Low	Brooklyn.
James B. Ludlow	New York.
Thomas W. Ludlow	Yonkers.
George C. Magoun	New York.
Albert Mathews	”
Alrick H. Man	”
Augustus C. Merriam	”
Henry C. Meyer	”
George Norton Miller, Jr.	”
Frank D. Millet	”
D. O. Mills	”
Miss E. T. Minturn	”
R. B. Minturn	”
Edward Mitchell	”
William F. Morgan	”
Levi P. Morton	”
Julius C. Morgenthau	”
Henry Mottet	”
J. M. Muñoz	”
Marston Niles	”
Samuel L. Parish	”
Thomas W. Pearsall	”
Henry E. Pellew	”
Johnston L. de Peyster	Tivoli on Hudson.
J. W. Pinchot	New York.
Bruce Price	”
Miss Mary R. Prime	”
William C. Prime	”
M. Taylor Pyne	”
Edward E. Raht	”
Fred. W. Rhinelanders	”
J. Hampden Robb	”
Julius Sachs	”
Alden Sampson	”
Augustus St. Gaudens	”

Eugene Schuyler	Washington, D. C.
Miss Georgina Schuyler	New York.
Samuel Sloan	”
Daniel Drake Smith	Englewood, N. J.
Robert Hobart Smith	New York.
Robert W. Smith	Philadelphia.
Sidney A. Smith	New York.
William Alexander Smith	”
Charles F. Southmayd	”
Edward A. Spring	Perth Amboy, N. J.
W. J. Stillman	London, Eng.
Miss Ellen J. Stone	New York.
Richard S. Storrs	Brooklyn.
Charles E. Strong	New York.
Russell Sturgis	”
Frank B. Tarbell	New Haven, Conn.
Charles L. Tiffany	New York.
Louis C. Tiffany	”
William H. Tillinghast	”
S. B. P. Trowbridge	New Haven, Conn.
Hamilton McK. Twombly	New York.
J. C. Van Benschoten	Middletown, Conn.
Cornelius Vanderbilt	New York.
William K. Vanderbilt	”
Edgar B. Van Winkle	”
Charles Waldstein	Cambridge, Eng.
Frank Waller	New York.
J. Q. A. Ward	”
Samuel G. Ward	”
William Hayes Ward	”
William R. Ware	”
William R. Warren	”
Harold P. Waterman	”
W. S. Webb	”
Horace White	”

TRUSTEES OF THE AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS.

JAMES RUSSELL LOWELL, *President.*

SAMUEL D. WARREN, *Treasurer.*

WILLIAM W. GOODWIN, *Secretary.*

MARTIN BRIMMER.

FREDERICK J. DE PEYSTER.

HENRY DRISLER.

BASIL M. GILDERSLEEVE.

HENRY G. MARQUAND.

CHARLES ELIOT NORTON.

HENRY C. POTTER.

WILLIAM M. SLOANE.

JOHN WILLIAMS WHITE.

THEODORE D. WOOLSEY.

REGULATIONS

ADOPTED MAY 17, 1879.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA is formed for the purpose of promoting and directing archæological investigation and research, — by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A. M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

At a meeting of the members of the Institute, held in Boston, October 11, 1884, the following Regulations were adopted, to go into effect November 1, in lieu of those previously in force.

REGULATIONS

ADOPTED OCTOBER 11, 1884.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA, consisting of a number of affiliated societies, is formed for the purpose of promoting and directing archæological investigation and research,—by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of archæological papers and of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Annual and of Life Members, the former being those persons, approved by the Council, who shall pay an annual assessment of \$10, and the latter such as shall contribute at one time not less than \$100 to its funds. Classes of Honorary and Corresponding Members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The government of the Institute shall be vested in a Council, annually chosen by the members of the affiliated societies, as follows:—

Any local archæological society, consisting of not less than ten members of the Institute, may, by vote of the Council, be affiliated with the Institute. Any such local society shall have the right to elect one member to the Council. When the members of such society shall exceed fifty, they shall have the right to elect a second member to the Council, and similarly another member for each additional fifty.

4. The Council shall hold an Annual Meeting on the second Saturday of May, at 11 o'clock A. M., at such place as may be se-

lected by its members at the previous Annual Meeting. Any member of the Council unable to be present at any meeting may appoint by writing any other member to act as his proxy. One half of all the members of the Council, present in person or by proxy, shall form a quorum.

5. Special meetings of the Council may be called by the Secretary, upon direction of the President, or at the written request of one third of its members.

6. At the Annual Meeting the Council shall elect one of its members as President, and another as Vice-President of the Institute. These officers shall be eligible for re-election.

7. A Secretary and Treasurer of the Institute shall be chosen by the Council, and shall hold office at its pleasure. The Secretary shall keep a record of the transactions of the Council, and shall perform such other duties as pertain to his office. The Treasurer shall collect, receive, and keep account of all assessments, subscriptions, and gifts of money to the Institute, shall pay its dues, and shall present to the Council at its Annual Meeting a written statement of accounts.

8. Assessments, subscriptions, and donations may be paid to the Treasurer, or to any member of the Council. No person, not a life member, who has not paid his dues as member for the year then past, shall be entitled to vote in the election of members of the Council. The year shall be considered as closing with the end of the Annual Meeting, and from this time the assessment for the year then ensuing shall become due.

9. Ten per cent of all annual dues received from each affiliated Society shall be held by the Treasurer, subject to the call of the Treasurer of the affiliated Society, for the discharge of local expenses. In case any Society does not in any year require the whole of this sum, the balance shall, at the end of the year, be passed into the general funds of the Institute, not subject to future call. Grants in aid of local societies may be made by the Council.

10. The accounts of the Institute shall be submitted annually by the Treasurer to two Auditors, to be appointed by the President, who shall attest by their signatures the correctness of said accounts, and report the same at the annual meeting.

11. The Council shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment; to employ agents, and to expend all the available funds of the Institute for the purpose for which it is formed; but it shall not have the power to incur any debt on behalf of the Institute. It shall have no other jurisdiction over the regulations or actions of the affiliated local Archæological Societies, than that these societies shall not undertake any formal publication without its consent; and any moneys contributed for any object promoted by a local society, approved by the Council, shall be strictly appropriated to that object.

12. At each Annual Meeting the Council shall appoint a Standing Committee of not less than three of its members, to edit the publications of the Institute for the ensuing year, and to prepare an Annual Report to be presented in print at the next Annual Meeting.

13. Any collections of antiquities which may come into the possession of the Institute through the explorations undertaken by it, or otherwise, may be sold, at the discretion of the Council, to the museum or other public institution in the United States which may offer for them the largest sum; it being understood that contributions toward the cost of any exploration may be assigned by the donors to the credit of any museum or public institution as part of the purchase money.

14. A general meeting of the Institute may be called from time to time, at the discretion of the Council.

15. Each member of the Institute shall receive a copy of every publication of the Institute issued during the period of his membership.

16. The names of all affiliated societies and members shall be printed with the annual report of the Council.

17. Each affiliated society shall be designated by its local name in the following style:—

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

BALTIMORE SOCIETY.

And it shall have the right to use the seal of the Institute on its official papers.

18. Amendments to these regulations, of which printed notice has been sent to each member of the Council not less than two weeks previously, may be proposed by any three members at any Annual Meeting, and shall require for adoption the affirmative vote of three fourths of the whole number of members of the Council.

RULES OF THE BOSTON SOCIETY.

ADOPTED MAY, 1885.

1. THE BOSTON SOCIETY OF ARCHÆOLOGY, organized under the regulations of the Archæological Institute of America, is formed of members of the Institute resident in New England not belonging to any other society affiliated with the Institute, and of such members outside of New England as may elect to be enrolled in it.
2. The entire government of the Society, including the election of members, is vested in an Executive Committee of seven members, to be chosen annually to serve for one year, or until the election of their successors.
3. The Executive Committee shall choose from its own number a President and Vice-President, and may appoint a Secretary and Treasurer. It shall have no power to involve the Society in any expense not covered by its share of the funds of the Institute, and may not levy any tax upon the members in addition to their annual subscription.
4. The annual meeting of the Society shall be held in Boston on the first Saturday of May at 11 o'clock A.M., when the Executive Committee shall report upon the work of the Society and of the Institute during the preceding year. Special meetings may be called at any time by the President, by three members of the Executive Committee, or by any ten members of the Society.
5. These rules may be changed only at an annual meeting, upon due notice.

RULES OF THE NEW YORK SOCIETY.

ADOPTED FEBRUARY 19, 1885.

1. THE NEW YORK SOCIETY is organized under the regulations of the Archæological Institute of America, for the purpose of carrying out more fully the objects for which the Institute is established.

2. The New York Society shall include those members of the Institute who are residents in the cities of New York and Brooklyn, and such other members as may elect to belong to it. Candidates for membership may be proposed by any member of the Society. The Society shall have no power to levy assessments upon its members in addition to their annual subscription.

3. The officers of the Society shall be a President, a number of Vice-Presidents, a Secretary, a Treasurer, and a Committee on Membership. This Committee shall have final power, and shall consist of six members, and of the President of the Society *ex officio*.

4. An annual meeting shall be held on the second Saturday of November in each year, for the election of officers and of delegates to the Council of the Institute, and for the transaction of business. Ten members present shall constitute a quorum. All officers shall be chosen by ballot, to serve one year or until their successors are chosen. But no member of the Committee on Admissions, except the President, shall serve for more than two consecutive years.

5. Special meetings for special purposes shall be called from time to time, at the discretion of the President.

6. The President and Treasurer shall have authority to use for the current expenses of the Society the money set apart for that purpose under the regulations of the Institute, and the Treasurer shall make an annual report to the Society of such expenditures. They shall have no power to involve the Society in debt.

7. These rules shall not be altered or amended except at an annual meeting.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

SEVENTH ANNUAL REPORT.

TO THE MEMBERS OF THE ARCHÆOLOGICAL INSTITUTE:—

THE past year has been important in the history of the Institute, through the advance made toward the accomplishment of one of the chief objects which it has had in view since its foundation.

The Fourth Annual Report of the Managing Committee of the School at Athens, presented to the Institute in the autumn of 1885, contained a full account of the work of the School, and of its immediate prospects and needs, especially of its need of means to erect a building for its use at Athens upon the site liberally offered to it by the government of Greece. A portion of the sum required had already been given to the Committee, but not less than twenty thousand dollars was still needed for the purpose. Committees were formed in Boston and New York to solicit subscriptions, and in a short time a sum of nearly nineteen thousand dollars (including the amount, nearly four thousand dollars, previously given) was obtained by the Boston Committee, while the remainder of the

sum needed for the building is assured by the Committee in New York.

The permanent housing of the School, which owes its existence to the Institute, and which has already justified the hope that inspired its foundation, has thus been secured, and the Council desire, in the name of the Institute, to express their gratitude to the individual subscribers for their generous gifts, and to the members of the committees by whom the subscriptions have been obtained, for their successful efforts.

Plans for the building have been prepared by Professor W. R. Ware, and it is hoped that the work of erection may be soon begun. The building is designed to provide a suitable home for the Director of the School, with rooms to accommodate a number of students, as well as suitable lecture-rooms and studies, and a large apartment for the Library. The building will be simple and substantial.

The thanks of the Institute are due to the eminent architect, Mr. F. C. Penrose, who designed the building of the British School at Athens, and under whose supervision it has been erected, for the ready kindness with which he supplied a copy of his plans for the use of the Committee in charge of the building of the American School, and for his advice in regard to practical details, to which his experience and judgment give the utmost value.

A Board of Trustees has been incorporated to hold the property of the School.

Much yet remains to be accomplished before the School can be regarded as established upon a satisfactory basis,—mainly, the obtaining of an invested fund, the interest upon which shall be sufficient to provide the salary of a permanent Director resident at Athens, and for the increase of the library of the School. This fund ought not to be less than one hundred thousand dollars, and the Council trust that the efforts of the committees which have been so successful in obtaining the sum required for the building will not be relaxed until the whole, or a large part, of the fund is secured. Another important object to be accomplished is the foundation of a number of scholarships for the partial support of students. Many young men who might wish to profit by the advantages offered by the School have not the means to do so unassisted. To aid deserving students, a few scholarships, with an income of perhaps five hundred dollars, would be of great service. Such scholarships might be established by gifts to the Trustees of the School, or to the governing bodies of any college in which the donor might be specially interested.

The Report, by Dr. William Hayes Ward, of the Wolfe Expedition to Babylonia, which was received by the members of the Institute a few months since, shows that this expedition, brief as it was, and intended as a reconnoissance of the territory, and not

for thorough investigation of any special site, was ably and vigorously conducted, and not unproductive of important results.

Its outfit was due to the liberality of Miss C. L. Wolfe, of New York. The party composing it consisted of Dr. Ward, Dr. Sterrett, and Mr. J. H. Haynes. Their route from Mersin on the Cilician coast to Baghdad led them through a part of the Hittite country, in which they were fortunate enough to discover some sculptures and inscriptions of considerable importance. The most interesting part of the journey was the visit to Southern Babylonia, a country which "had not been visited by European travellers for over thirty years." Many mounds, some of them evidently covering the remains of extensive cities, were examined for the first time. One of especial importance, that of Anbar, is conjectured by Dr. Ward to represent the great city Sippara of Anunit, whose site had before been fixed by other writers at Abu-Habba. Many photographs were taken, and some drawings were made, of important objects. Inscriptions were carefully copied; and these and the sculptures Dr. Ward is now editing for publication in the "American Journal of Archæology." A collection of about two hundred and fifty Babylonian and Assyrian seal-cylinders was obtained, and these have the peculiar value,—a value not always shared by similar possessions of great national museums in Europe,—that the localities from which the greater

number of them came were accurately ascertained. By the comparative study of such works whose origin is known, a rational conception of the development and characteristics of the glyptic art of Babylonia at different periods is made possible. It must not be forgotten that these seals are almost the only monuments of Babylonian sculpture which we possess.

It is to be hoped that the experience gained in this preliminary expedition may be made practically useful, very soon, in a second expedition, on a scale sufficient to allow of the opening and thorough exploration of some of the large mounds.

Dr. Sterrett, whose connection with the party was prematurely brought to an end by a severe illness, was able, after regaining his health, to return by way of Asia Minor, and to continue his researches in the almost unexplored centre of the country. His two journeys in 1884 and 1885 have yielded very large results in geographical and archæological discovery. He is at present engaged in editing his collection of over nine hundred hitherto inedited inscriptions, the publication of which will be a contribution to Anatolian epigraphy of no secondary importance.

The liberality of Miss Wolfe, for which your Council desire to express their grateful recognition, has been again shown in supplying Dr. Sterrett with the means requisite for the prosecution of his studies in Europe while editing his Report during the current year. This Report will probably form one

or more volumes of the Papers of the School at Athens.

The results of the Assos Expedition, the great importance of which becomes more clear the more they are worked out, will soon be laid before the Institute in an adequate manner. The second part of Mr. Clarke's formal Report is nearly completed, and will be issued as soon as possible, while a number of special topics of importance, which could not be treated in the general report with all desirable detail, will be presented in separate papers in the "American Journal of Archæology." Arrangements have been made to issue to the members of the Institute reprints of these articles. The subject of the first of these papers, already in print, is a proto-Ionic capital found on the site of Neandreaia in the Troad; this discovery throws a new light on the much disputed question of the origin and development of the Ionic style.

In the Report of the Council for the last year the attention of the members of the Institute was called to the then newly founded "Journal of Archæology." This periodical is now in its second year of publication, and it has already achieved a gratifying success. It has received the most cordial assistance of many of the first archæologists, at home and abroad, who find it a neutral ground whereon all can meet. The aim of its

editors is to create an international review, in which the progress of archæology shall be carefully and thoroughly recorded. This is a work involving such great and continuous labor that it has never been seriously undertaken, although the need of it has been generally felt by students. The pages of the Journal record the explorations going on in Europe and the East and in America, and their results; newly published works are noticed as they appear; the numerous periodicals devoted to archæology are analyzed; new acquisitions to museums are recorded;— in short, the progress in archæological science is kept clearly before the reader of the Journal. Such a journal is not a source of pecuniary profit to its editors or contributors. Their labors are for the most part absolutely gratuitous. They do the work for the sake of science; but they cannot afford to pay for the cost of publication. It would be a serious loss to the progress of archæological studies were the Journal to fail to receive such support as should cover this necessary cost, and we urge its claims to support upon the members of the Institute. Your Council have thought it wise to make an appropriation from the funds of the Institute toward its maintenance, feeling assured that the objects for which the Institute was established could not be more directly promoted.

The School at Athens will be the natural centre of any future operations which the Institute may un-

dertake in Southeastern Europe, or on the shores of the Mediterranean. If properly organized, under a permanent Director, it will be able to give essential aid in all such undertakings. It may be well to consider here the possible future work of the Institute in the way of exploration and discovery. We have alluded, above, to the hope that a second and more definite expedition should be directed to Babylonia, with a view to opening some of the more promising mounds. As to the question, What other sites in classic lands are most available for investigation? — especially in view of the possibility of obtaining for America at least some part of the works of art that may be found, — two regions, as yet imperfectly explored, seem to be the most attractive, the Cyrenaica and Magna Grecia. In the Cyrenaica the Turkish laws against the export of antiquities have no force, as Tripoli practically enjoys independence. Here, in the ruins of the cities founded by the Greek colonists in the seventh and sixth centuries before Christ, the probability of interesting discoveries is great. Mr. Clarke in a lecture at the Johns Hopkins University in 1884, and Mr. Goddard in the "Journal of Philology" (1884, p. 31), have dwelt at length on its advantages as a site for exploration.

The second field, Magna Grecia, is even more attractive, as well as accessible. The great cities of Southern Italy — Tarentum, Capua, Sybaris, Croton, and others — require to be investigated with scientific

thoroughness. The chance discoveries in the past, on these sites, of works of great archæological and artistic value, attest the existence of an immense mine of antiquities of the best Greek periods. In late years, only Lenormant has described with any thoroughness the sites of Magna Grecia, and the three volumes of his "La Grande Grèce" afford sufficient evidence of the remarkable interest of this field. As a site for research, Tarentum would seem to unite many advantages: the climate is healthy, so that excavations might be carried on during the entire year; the modern city, on the site of the ancient acropolis, would furnish an abundance of workmen; and, finally, desultory excavations have here, more than at any other site, yielded satisfactory results. Attention has been called, during the last few years, to its necropolis, by large discoveries of terra-cotta figurines similar to the Tanagra and Asia Minor statuettes. Some months since, the extensive works undertaken by the Italian government to make of Tarentum another Toulon led to discoveries of a highly interesting character, especially in terra-cottas, some of which are archaic, and almost purely Egyptian in style. Excavations undertaken here would in all probability yield a large number of Greek bronzes, terra-cottas, coins, painted vases, and perhaps works of greater size and importance,—a good foundation for a museum. A sufficient expedition could be started with a comparatively small sum,—

perhaps three thousand or thirty-five hundred dollars, —and continued only if success crowned the first endeavors. The Italian government would not place any obstacle in the way of the export of antiquities, except in cases of extraordinary importance.

It is to be desired that funds be raised in New York and Boston for such an undertaking as would, besides adding to knowledge, enrich the museums of these cities with a large accession of works valuable for their artistic merit, and of accurately known and clearly demonstrated origin and relations. The State has authorized the building of a large addition to the Metropolitan Museum of Art in New York, almost doubling its capacity, and the work is already well advanced. Within a few years space will be afforded for the reception of very considerable additions to the possessions of the Museum. These buildings will be of permanent character and fire-proof, and it may be confidently hoped that they will be well arranged and well lighted. A similar addition to the Museum of Fine Arts in Boston is imperatively needed, and cannot be long delayed. Now is the time, therefore, to fit out an expedition which shall not only add to the artistic wealth of the country, but also promote the interests of archæology, and increase our knowledge of an important portion of Greek antiquity. The researches that we propose would be carried on under competent direction, and it would be the first duty of the Institute to see that the highest archæo-

logical talent and the greatest experience and energy should be enlisted in the undertaking. The experience gained at Olympia, at Pergamon, and at Assos can be freely utilized. The antiquities discovered could be offered to the Museum completely described, catalogued, and labelled, the exact place of discovery of each fragment fully recorded, and its full archæological significance set forth. The work which the Institute has already accomplished is a sufficient warrant to those who may contribute to such an expedition as is here proposed, that it would be conducted in the most thorough and efficient manner.

Meanwhile a work has already been undertaken by the New York Society in another field, which gives promise of interesting results.

Early in February, information was received from Mr. J. H. Haynes, — formerly an instructor in Robert College, Constantinople, and a member of the Wolfe Expedition to Babylonia, for which he acted as photographer, as he had previously done for the Assos Expedition, — that he had received an appointment at the American College at Aintab, in the eastern part of Asia Minor, near the ancient seat of the Hittite kingdom, and that he would gladly undertake a journey through these regions, in behalf of the Society, during the coming summer. A number of gentlemen, members of the Society, in conjunction with the Metropolitan Museum of Art, at once subscribed the amount of money necessary to equip and support such

an expedition. It will be its object to examine, photograph, and report, not only upon the numerous Hittite remains, not yet published, which are to be found in that neighborhood, but also upon the early Christian churches said to exist upon the track of St. Paul's journeys in Lycaonia and Pisidia.

The following extract from a letter of Mr. Haynes, dated Aintab, 22 March, 1866, shows how large an opportunity for discovery is within his reach.

"I made a short excursion of about fifty miles to the westward a few days ago, and photographed a group of eleven fine Hittite figures, seven of which are human and four animal.

"There are other defaced and broken sculptures scattered about, some of which are gathered into a Moslem graveyard close by. The ancient city once occupying this site was partly built upon an artificial mound, about a half-mile in circuit and some thirty feet or more in height.

"The line of wall surrounding the lower city can be distinctly traced.

"Our spring vacation of two weeks begins in nine days, and I shall occupy it in searching the upper part of the plain in which I photographed the above-mentioned sculptures. From a distance I have seen many artificial mounds. No one has ever examined them. It is a famous centre for Hittite inscriptions and sculptures. The plain is about one hundred miles in length from Antioch to Marash. It is the upper part, for about forty-five miles, that I propose to examine now, and I will write you if anything is found."

While such are the interests and designs of the Institute in respect to archæological investigations

and classical studies in Europe and Asia, it does not neglect to promote the knowledge of American antiquities, although during the past year the limited means at the disposal of the Council have not permitted the undertaking of any new expedition.

Private engagements of an engrossing nature have prevented Mr. Bandelier from making as rapid an advance as had been hoped toward the completion of the final Report on the work done by him for the Institute during past years, which shall contain the summary of the results arrived at by him in his investigations of the past and present condition of the Indians in the States of the Southwest. He has now established his residence for a time at Santa Fé, and is engaged upon his Report, which the Council hope to be able to present in print to the members of the Institute in the course of the current year. He proposes to give in it, in addition to an account of his last journey, a general review of the field investigated by him, divided under the following heads:—

- I. Condition of the country in the sixteenth century.
 1. Sonora. Opatas, Southern Pimas.
 2. Chihuahua. Casas Grandes.
 3. Arizona. Northern Pimas, Apaches.
 4. New Mexico. Pueblos, Apaches, Jumanos.

This section will include the consideration of geographical distribution, statistics, ethnic relations, etc. of the tribes.

- II. Changes in customs, habits, numbers, locations, etc. to the present time.
- III. Archæology.
 - 1. Distribution and character of ruins.
 - 2. Remains connected with them.
 - 3. Aboriginal traditions connected with them.
- IV. A discussion of the question of the origin of the South-western tribes, and of their affinities with the Village Indians in Mexico.

The value of such a work as this, from the hand of so complete a master of the subject as Mr. Bandelier, is obvious, and your Council trust that the means may be provided for its publication, with all needed illustrations. It will serve as an introduction to the history of the region, and of the tribes treated of in it, up to the year 1700, which Mr. Bandelier hopes to prepare, and which no one is so competent to write as he.

With such work in hand, and such need as it involves of expensive publications, your Council cannot but urge upon the members of the different Societies of the Institute the importance of increasing the number of their members, in order to secure an annual income corresponding more nearly than that now at its command to the sum required for the accomplishment of objects so desirable.

During the past year there has been no increase of members of the Baltimore or Boston Society. On the other hand there has been a gratifying and prom-

ising increase in the membership of the New York Society, by which its numbers have been very nearly doubled. The number of actual life members, exempt from assessments, is, of the Baltimore Society, eight; of the Boston Society, seventy-six; of the New York Society, twenty; making one hundred and four in all. The number of annual members of the Baltimore Society is forty-four; that of the Boston Society is one hundred and seven, and that of the New York Society is one hundred and forty-six. The total number of members of the Institute is thus four hundred and one, while that of the annual members is two hundred and ninety-seven, and the income for the next year which may be relied upon will hardly amount to \$3000. Such a sum is obviously entirely inadequate for our needs. Were the membership doubled, the income would still be less than could be advantageously expended to promote the objects for which the Institute exists, and insufficient for the undertaking of new expeditions of importance. With a thousand annual members, a number that does not seem extravagant in view of the general interest among intelligent persons in the progress of researches into the past history and works of man, the resources of the Institute would allow it to engage in undertakings honorable to itself and serviceable to the advance of knowledge. With proper exertion, there might be a steady annual increase in the membership, and the Council suggest that the

action of the New York Society be imitated by the Societies of Baltimore and of Boston in the appointment of a Standing Committee on Membership, which should use diligent effort to enlarge the number of members.

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Archæological Institute of America.

EIGHTH ANNUAL REPORT.

1886-87.

PRESENTED AT THE ANNUAL MEETING OF THE
COUNCIL OF THE INSTITUTE.

BOSTON, MAY 14, 1887.



CAMBRIDGE:
JOHN WILSON AND SON.

University Press.

1887.



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CONTENTS.

	PAGE
COUNCIL	5
OFFICERS OF LOCAL SOCIETIES	7
LIST OF MEMBERS:— FOREIGN HONORARY MEMBERS	9
BOSTON SOCIETY	10
BALTIMORE SOCIETY	16
NEW YORK SOCIETY	19
TRUSTEES AND MANAGING COMMITTEE OF THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS	24
REGULATIONS	25
REPORT OF THE COUNCIL FOR 1886-87	33



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88—13

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14—1

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Daniel E. Parish, Jr.	"
Frederick J. de Peyster	"
Miss Helen Van Cortlandt de Peyster	"
Henry C. Potter	"
Spencer Trask	Brooklyn.
Robert Winthrop	New York.
*Miss Catharine L. Wolfe	"

21

Annual Members.

(1887-88.)

William Loring Andrews	New York.
Daniel S. Appleton	"
Sidney G. Ashmore	Schenectady.
E. S. Atwood	East Orange, N. J.
Samuel P. Avery	New York.
Charles Babcock	Ithaca.
John S. Battell	New York.

Charles C. Beaman, Jr.	New York.
I. T. Beckwith	Hartford, Conn.
Gerard Beekman	New York.
William B. Bigelow	"
George Bliss	"
William M. Bliss	"
Mrs. William T. Blodgett	"
A. J. Bloor	"
Mrs. H. C. G. Brandt	Clinton.
Arthur Brooks	New York.
Frederick T. Brown	"
John E. Burrill	"
Charles Butler	"
George Cary	Buffalo.
L. P. di Cesnola	New York.
D. H. Chamberlain	"
Joseph H. Choate	"
Miss Ellen Collins	"
Robert Collyer	"
Clarence R. Conger	"
M. J. O'Connor	"
S. W. Crawford	"
Howard Crosby	"
James G. Crowell	"
George William Curtis	West New Brighton, S. I.
Miss Mary E. Curtis	New York.
Arthur H. Cutler	"
Charles P. Daly	"
Thomas Davidson	Orange, N. J.
D. Stuart Dodge	New York.
William Dorsheimer	"
Henry Drisler	"
Loyall Farragut	"
Benjamin H. Field	"
Hamilton Fish	"
Miss Alice C. Fletcher	"
Roswell P. Flower	"
Clarence M. Fowler	"

Miss Julia Gibbons	New York.
Richard W. Gilder	"
Edwin L. Godkin	"
Parke Godwin	"
William H. Goodyear	"
Irving Grinnell	New Hamburg.
William Henry Gunther	New York.
Walter S. Gurnee	"
W. G. Hale	Ithaca.
Joseph W. Harper, Jr.	New York.
O. P. Hatfield	"
Robert Hoe	"
E. A. Hoffman	"
James M. Hoppin	New Haven, Conn.
Richard M. Hunt	New York.
S. H. Hunt	"
Waldo Hutchins	"
John B. Ireland	"
Charles Isham	"
John Jay	Katonah.
Morris K. Jesup	New York.
A. D. L. Jewett	"
John D. Jones	"
Edward Kemp	"
Edward H. Kendall	"
John S. Kennedy	"
William Krebs	"
R. H. Lamborn	"
Edward F. de Lancey	"
J. D. Lange	"
Pierre L. Le Brun	"
Pierre Lorillard	"
A. A. Low	Brooklyn.
A. Augustus Low	"
Seth Low	"
James B. Ludlow	New York.
Thomas W. Ludlow	Yonkers.
George C. Magoun	New York.

Albert Mathews	New York.
Alrick H. Man	"
Augustus C. Merriam	"
Henry C. Meyer	"
George Norton Miller, Jr.	"
Frank D. Millet	"
Miss E. T. Minturn	"
R. B. Minturn	"
Edward Mitchell	"
William F. Morgan	"
Julius C. Morgenthau	"
James H. Morse	"
Levi P. Morton	"
Henry Mottet	"
J. M. Muñoz	"
Marston Niles	"
Leonard E. Opdyke	"
Samuel L. Parish	"
Thomas W. Pearsall	"
Henry E. Pellew	"
Johnston L. de Peyster	Tivoli on Hudson.
J. W. Pinchot	New York.
Joseph D. Potts	Philadelphia.
Bruce Price	New York.
Miss Mary R. Prime	"
William C. Prime	"
M. Taylor Pyne	"
Edward E. Raht	"
Fred. W. Rhineland	"
J. Hampden Robb	"
Julius Sachs	"
Alden Sampson	"
Augustus St. Gaudens	"
Eugene Schuyler	Washington, D. C.
Miss Georgina Schuyler	New York.
Samuel Sloan	"
Robert Hobart Smith	"
Robert W. Smith	Philadelphia.

Sidney A. Smith	New York.
William Alexander Smith	"
Charles F. Southmayd	"
Edward A. Spring	Perth Amboy, N. J.
C. Ellis Stevens	Brooklyn.
W. J. Stillman	London, Eng.
Miss Ellen J. Stone	New York.
Richard S. Storrs	Brooklyn.
Charles E. Strong	New York.
Russell Sturgis	"
Frank B. Tarbell	New Haven, Conn.
Charles L. Tiffany	New York.
Louis C. Tiffany	"
William H. Tillinghast	"
S. B. P. Trowbridge	New Haven, Conn.
Arthur L. Tuckerman	New York.
Hamilton McK. Twombly	"
J. C. Van Benschoten	Middletown, Conn.
Cornelius Vanderbilt	New York.
William K. Vanderbilt	"
Edgar B. Van Winkle	"
Charles Waldstein	Cambridge, Eng.
Frank Waller	New York.
J. Q. A. Ward	"
Samuel G. Ward	"
William R. Ware	"
William R. Warren	"
Harold P. Waterman	"
Lucius R. Waterman	Fishkill.
W. S. Webb	New York.
Everett P. Wheeler	"
Horace White	"
Frederick Cope Whitehouse	"

TRUSTEES OF THE AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS.

JAMES RUSSELL LOWELL, *President.*

SAMUEL D. WARREN, *Treasurer.*

WILLIAM W. GOODWIN, *Secretary.*

MARTIN BRIMMER.

FREDERICK J. DE PEYSTER.

HENRY DRISLER.

BASIL M. GILDERSLEEVE.

HENRY G. MARQUAND.

CHARLES ELIOT NORTON.

HENRY C. POTTER.

WILLIAM M. SLOANE.

JOHN WILLIAMS WHITE.

THEODORE D. WOOLSEY.

REGULATIONS

ADOPTED MAY 17, 1879.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA is formed for the purpose of promoting and directing archæological investigation and research, — by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Life Members, being such persons as shall contribute at one time not less than \$100 to its funds, and of Annual Members, who shall contribute not less than \$10. Classes of honorary and corresponding members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The Government of the Institute shall be vested in an Executive Committee, consisting of a president, a vice-president, a treasurer, a secretary, and five ordinary members.

4. The president, the vice-president, and the five ordinary members of the Executive Committee shall be chosen by the ballot of the life and annual members at the annual meeting of the Institute, and shall hold office for one year, or until their successors are chosen. They shall be eligible for re-election.

The treasurer and secretary shall be chosen by the president, the vice-president, and the five ordinary members of the Executive Committee, and shall hold office at their pleasure.

The government of the Institute shall be empowered to fill up, *pro tempore* by election, all vacancies in its body occasioned by the death or resignation of any of its members.

5. The Executive Committee shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute.

It shall make its own regulations, and determine its own methods of procedure.

The secretary shall keep a careful record of its transactions, and the committee shall submit a full written report concerning them at each annual meeting.

6. The accounts of the Institute shall be submitted annually to two auditors, who shall be elected for that purpose by the members of the Institute at the annual meeting, and who shall attest by their signatures the accuracy of the said accounts.

7. The annual meeting shall be held in Boston on the third Saturday of May, at eleven o'clock A. M.

8. Special meetings of the Institute may be called at any time at the discretion of the Executive Committee.

9. Subscriptions and donations may be paid to the treasurer or any member of the Executive Committee, and no person not a life member shall be entitled to vote at the annual meeting who has not paid his subscription for the past year. The year shall be considered as closing with the termination of the annual meeting, from which time the subscription for the ensuing year shall become due.

10. An amendment of the regulations shall require the vote of three fourths of an annual meeting.

AT a meeting of the members of the Institute, held in Boston, October 11, 1884, the following Regulations were adopted, to go into effect November 1, in lieu of those previously in force.

REGULATIONS

ADOPTED OCTOBER 11, 1884.

1. THE ARCHÆOLOGICAL INSTITUTE OF AMERICA, consisting of a number of affiliated societies, is formed for the purpose of promoting and directing archæological investigation and research,— by the sending out of expeditions for special investigation, by aiding the efforts of independent explorers, by publication of archæological papers and of reports of the results of the expeditions which the Institute may undertake or promote, and by any other means which may from time to time appear desirable.

2. The Archæological Institute shall consist of Annual and of Life Members, the former being those persons, approved by the Council, who shall pay an annual assessment of \$10, and the latter such as shall contribute at one time not less than \$100 to its funds. Classes of Honorary and Corresponding Members may be formed at the discretion of the government of the Institute, and under such regulations as it may impose.

3. The government of the Institute shall be vested in a Council, annually chosen by the members of the affiliated societies, as follows:—

Any local archæological society, consisting of not less than ten members of the Institute, may, by vote of the Council, be affiliated with the Institute. Any such local society shall have the right to elect one member to the Council. When the members of such society shall exceed fifty, they shall have the right to elect a second member to the Council, and similarly another member for each additional fifty.

4. The Council shall hold an Annual Meeting on the second Saturday of May, at 11 o'clock A. M., at such place as may be se-

lected by its members at the previous Annual Meeting. Any member of the Council unable to be present at any meeting may appoint by writing any other member to act as his proxy. One half of all the members of the Council, present in person or by proxy, shall form a quorum.

5. Special meetings of the Council may be called by the Secretary, upon direction of the President, or at the written request of one third of its members.

6. At the Annual Meeting the Council shall elect one of its members as President, and another as Vice-President of the Institute. These officers shall be eligible for re-election.

7. A Secretary and Treasurer of the Institute shall be chosen by the Council, and shall hold office at its pleasure. The Secretary shall keep a record of the transactions of the Council, and shall perform such other duties as pertain to his office. The Treasurer shall collect, receive, and keep account of all assessments, subscriptions, and gifts of money to the Institute, shall pay its dues, and shall present to the Council at its Annual Meeting a written statement of accounts.

8. Assessments, subscriptions, and donations may be paid to the Treasurer, or to any member of the Council. No person, not a life member, who has not paid his dues as member for the year then past, shall be entitled to vote in the election of members of the Council. The year shall be considered as closing with the end of the Annual Meeting, and from this time the assessment for the year then ensuing shall become due.

9. Ten per cent of all annual dues received from each affiliated Society shall be held by the Treasurer, subject to the call of the Treasurer of the affiliated Society, for the discharge of local expenses. In case any Society does not in any year require the whole of this sum, the balance shall, at the end of the year, be passed into the general funds of the Institute, not subject to future call. Grants in aid of local societies may be made by the Council.

10. The accounts of the Institute shall be submitted annually by the Treasurer to two Auditors, to be appointed by the President, who shall attest by their signatures the correctness of said accounts, and report the same at the annual meeting.

11. The Council shall have full power to determine the work to be undertaken by the Institute, and the mode of its accomplishment ; to employ agents, and to expend all the available funds of the Institute for the purpose for which it is formed ; but it shall not have the power to incur any debt on behalf of the Institute. It shall have no other jurisdiction over the regulations or actions of the affiliated local Archæological Societies, than that these societies shall not undertake any formal publication without its consent ; and any moneys contributed for any object promoted by a local society, approved by the Council, shall be strictly appropriated to that object.

12. At each Annual Meeting the Council shall appoint a Standing Committee of not less than three of its members, to edit the publications of the Institute for the ensuing year, and to prepare an Annual Report to be presented in print at the next Annual Meeting.

13. Any collections of antiquities which may come into the possession of the Institute through the explorations undertaken by it, or otherwise, may be sold, at the discretion of the Council, to the museum or other public institution in the United States which may offer for them the largest sum ; it being understood that contributions toward the cost of any exploration may be assigned by the donors to the credit of any museum or public institution as part of the purchase money.

14. A general meeting of the Institute may be called from time to time, at the discretion of the Council.

15. Each member of the Institute shall receive a copy of every publication of the Institute issued during the period of his membership.

16. The names of all affiliated societies and members shall be printed with the annual report of the Council.

17. Each affiliated society shall be designated by its local name in the following style :—

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

BALTIMORE SOCIETY.

And it shall have the right to use the seal of the Institute on its official papers.

18. Amendments to these regulations, of which printed notice has been sent to each member of the Council not less than two weeks previously, may be proposed by any three members at any Annual Meeting, and shall require for adoption the affirmative vote of three fourths of the whole number of members of the Council.

RULES OF THE BOSTON SOCIETY.

ADOPTED MAY, 1885.

1. THE BOSTON SOCIETY OF ARCHÆOLOGY, organized under the regulations of the Archæological Institute of America, is formed of members of the Institute resident in New England not belonging to any other society affiliated with the Institute, and of such members outside of New England as may elect to be enrolled in it.

2. The entire government of the Society, including the election of members, is vested in an Executive Committee of seven members, to be chosen annually to serve for one year, or until the election of their successors.

3. The Executive Committee shall choose from its own number a President and Vice-President, and may appoint a Secretary and Treasurer. It shall have no power to involve the Society in any expense not covered by its share of the funds of the Institute, and may not levy any tax upon the members in addition to their annual subscription.

4. The annual meeting of the Society shall be held in Boston on the first Saturday of May at 11 o'clock A. M., when the Executive Committee shall report upon the work of the Society and of the Institute during the preceding year. Special meetings may be called at any time by the President, by three members of the Executive Committee, or by any ten members of the Society.

5. These rules may be changed only at an annual meeting, upon due notice.

RULES OF THE NEW YORK SOCIETY.

ADOPTED FEBRUARY 19, 1885.

1. THE NEW YORK SOCIETY is organized under the regulations of the Archæological Institute of America, for the purpose of carrying out more fully the objects for which the Institute is established.

2. The New York Society shall include those members of the Institute who are residents in the cities of New York and Brooklyn, and such other members as may elect to belong to it. Candidates for membership may be proposed by any member of the Society. The Society shall have no power to levy assessments upon its members in addition to their annual subscription.

3. The officers of the Society shall be a President, a number of Vice-Presidents, a Secretary, a Treasurer, and a Committee on Membership. This Committee shall have final power, and shall consist of six members, and of the President of the Society *ex officio*.

4. An annual meeting shall be held on the second Saturday of November in each year, for the election of officers and of delegates to the Council of the Institute, and for the transaction of business. Ten members present shall constitute a quorum. All officers shall be chosen by ballot, to serve one year or until their successors are chosen. But no member of the Committee on Admissions, except the President, shall serve for more than two consecutive years.

5. Special meetings for special purposes shall be called from time to time, at the discretion of the President.

6. The President and Treasurer shall have authority to use for the current expenses of the Society the money set apart for that purpose under the regulations of the Institute, and the Treasurer shall make an annual report to the Society of such expenditures. They shall have no power to involve the Society in debt.

7. These rules shall not be altered or amended except at an annual meeting.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.

EIGHTH ANNUAL REPORT.

TO THE MEMBERS OF THE ARCHÆOLOGICAL INSTITUTE : —

ALTHOUGH the Institute has directly undertaken the prosecution of no great work during the past year, the work promoted by it — for the inception, and in large measure the execution, of which, it is responsible — has in various directions been carried on with vigor and to excellent purpose.

The Report of the Committee in charge of the School at Athens, which should have been made early in the year, having been delayed by hindrances practically unavoidable, is, at the desire of the Chairman of the Committee, to be postponed in order to appear in connection with the Report for the present year. The two Reports will record the satisfactory progress of the School, and show that there is ground for assurance that the design of the Institute in its foundation will be completely accomplished, to the great and lasting benefit of classical scholarship in America.

In the course of the past year an interesting piece of archæological work has been done by the members

of the School, in the investigation of the remains of the theatre at Thorikos, on the southeast coast of Attica, some seven miles north of the promontory of Sunium. A report of this investigation by one of the members of the School will speedily appear. Many points of somewhat unusual architectural and archæological interest revealed themselves in the course of the study of this little theatre.

Since the accomplishment of this work, the means for which were provided in part by the Institute, the School has engaged, with the permission of the Greek Government, in the exploration of the more important remains of the noted theatre at Sikyon. Although these remains have been noticed by travellers such as Leake, Ross, and Curtius, they have never been thoroughly studied, and discoveries of considerable interest may be expected from a careful investigation of them. The beauty of the situation of Sikyon, upon a height not far from the Corinthian gulf, its long history and generally prosperous existence, and its great renown as one of the chief seats of Greek art, all combine to promise results of importance from the study of its ruins. Under date of Athens, April 1, 1887, Professor D'Ooge, the present Director of the School, writes: —

“ The means we have in hand will be sufficient, I trust, to enable us to determine the area of the Orchestra and its relation to the Skené, besides laying bare the latter structure, and possibly to dig out the arched passage-ways that lead to the diazoma. We have found thus far an interesting Skené structure, showing both Greek and Roman arrangements ;

pieces of Doric and Ionic architecture, fragments of sculpture, and bases of two statues. Much more remains to be done. Not far from the theatre the Dionysion must lie ; about ten rods from the theatre there is the stylobate of what appears to have been a temple. Near the entrance to the old city there is a place which looks as if it were a nekropolis, and where I should dig if I had the money. I hope that at least five hundred dollars will be granted to prosecute the works next autumn. This amount could be wisely expended in trial excavations. Should important discoveries be made, more could be done later."

In our last Report it was stated that, the means having been secured by the liberal contributions of subscribers, mainly in Boston and New York, it was hoped that the erection of the building for the School, according to the admirable plans prepared by Professor Ware, upon the site generously offered for the purpose by the Greek Government, might speedily be begun. This work was commenced early in November last. The foundation walls having been completed, the cornerstone was laid with appropriate ceremonies on the 12th of March, in presence of representatives of the Greek Government, of the Diplomatic Corps resident at Athens, of the heads of the English, French, and German Schools, and of other distinguished persons ; Mr. Fearn, Minister of the United States at Athens, Mr. Dragoumis, Minister of Foreign Affairs, Professor D'Ooge, and representatives of the English and German Schools making appropriate addresses. The building stands upon the northern edge of an area, about a quarter of a mile square, devoted entirely to public uses.

The grounds of the School itself are about an acre and a half in extent. On the western side is the land of the British School, of equal extent; to the south the open grounds of the Hospital of Evangelismos, and beyond them a small park. To the eastern side are the land and buildings of the Monastery of the Asomaton, on the site of the ancient Cynosarges, — a delightful neighbor, as this is one of the few spots in Athens where there is a good growth of trees, the lineal descendants perhaps of the sacred grove which occupied this spot. The building, which, besides ample accommodation for the Director and his family, will contain several rooms for students and a large library, will be finished towards the end of the summer. The site is high and wholesome, commanding an entrancing prospect which will probably always remain unobstructed by buildings, and is within fifteen minutes' walk of the centre of the city.

The New York Society has adhered to the policy adopted at the time of its organization, and while dispensing with stated meetings, the maintenance of which is apt to become burdensome to officers and members alike, has taken advantage of such opportunities as it could find or make to attract attention to the objects of the Institute and stimulate interest in its undertakings. The establishment and endowment of the School at Athens being the chief enterprise which the Institute now has in hand, it has been upon this that the Society has this year concentrated its efforts. The

first step towards this end was to promote and secure the financial and social success of the representation of Aristophanes' "Acharnians," which a number of eminent scholars, representing fourteen colleges and universities, had invited the authorities of the University of Pennsylvania to repeat in New York, in the interests of classical studies. The Provost of the University, in acceding to this request, expressed a wish that the proceeds of the performance should be added to the fund for the permanent endowment of the Athens School. The New York Society perceived here an opportunity for their good offices; and a number of its members formed themselves into a volunteer committee, to co-operate with the gentlemen from Philadelphia and to conciliate for the enterprise the good-will of the community. The result of these efforts was to assemble in the Academy of Music an audience that has seldom been matched in this country for the social and personal eminence of the persons who composed it. The financial result was extremely satisfactory; but, what was of more importance, the School and the Institute were made favorably known to the persons who by taste and education were most competent to take an interest in them. This was followed, early in February, by a course of four public lectures, delivered on successive Saturday evenings, by Dr. Waldstein, Professor Gildersleeve, Professor Merriam, and Professor Goodwin. The subjects of these lectures, which also

were given for the benefit of the School of Athens, were "The Study of Greek Art," "Sappho," "The Discoveries at Epidauros and the Faith Cure among the Ancients," and "Recent Study and Exploration in Greece." They were attended by audiences of good size and of marked intelligence, and, besides introducing to the New York public the eminent professors of our own colleges, afforded Dr. Waldstein's fellow-townsmen an opportunity of renewing their acquaintance with him, and of justifying the wisdom of the Committee in the selection of a permanent Director. These lectures were immediately followed by two courses of lectures upon Roman Archæology, given under the auspices of the Society, by Professor Rodolfo Lanciani, Director of Excavations for the City and Province of Rome. These again were both a social and a financial success, the hall at first engaged having to be abandoned for the more ample accommodations of the Madison Square Theatre, which was filled, lecture after lecture, by very much the same audience that had first assembled three months before to witness the Greek play. The Committee were able to offer the eminent lecturer an *honorarium* of nearly six times the amount they had in the first instance proposed, and also to add to the fund of the School at Athens a handsome sum of money, which, at Mr. Lanciani's desire, will be devoted to furnishing the new building, as his gift.

No sooner were these lectures over than a Committee

— composed partly of members of the Society and partly of other gentlemen, some of whom rivalled the members of the Society in eagerness to further the fortunes of the Athens School— issued invitations for a public dinner to be given in behalf of the School, and at which Mr. James Russell Lowell as chairman of its Trustees, Dr. Waldstein as its prospective Director, and the different members of the Committee who have the conduct of the School in their hands, should have an opportunity of explaining its objects and methods. The dinner was attended by nearly a hundred and fifty persons, and will long be remembered by those who were so fortunate as to be present. Mr. George William Curtis presided; and after Mr. Lowell and Dr. Waldstein had spoken, the story of the School was told by Mr. Norton, Mr. Sloane, Dr. Drisler, Mr. Merriam, and Mr. Seymour, and response made for the public by Mr. Depew and the Rev. Dr. Crosby. A more favorable opportunity for presenting the claims of the School could not have been desired. Sketches of the school building were hung upon the walls, and the very light and air of Attica were brought into the room by Church's great painting of the "Parthenon at Sunset," lent for the evening by the public spirit of Mr. Jesup, to whom it belongs. A few days after the dinner, a meeting was held at Columbia College, and a Committee appointed to take active steps towards the completion of the endowment fund.

In the last Report (p. 40) the question of future investigations to be undertaken under the auspices of the Institute was discussed, and Magna Græcia was recommended as a field which at present seemed most attractive and accessible. At a meeting of the Council the sum of \$1,000 was voted for exploration in that region, on condition that a further sum of at least \$2,000 should be raised for the same purpose. The project was taken up by the Baltimore Society, by whose efforts the necessary sum was secured, and the work was intrusted to Mr. Joseph Thacher Clarke, with whom was associated Dr. Alfred Emerson, former Instructor in Archæology at Johns Hopkins University. The object of their exploration was two-fold: (1) to investigate some monument of importance to the history of Greek art, thus making a distinct addition to science; (2) to secure some works of Greek art of various periods. It became apparent to Messrs. Clarke and Emerson, at the outset, that these two objects should be separated in practice, as the experience of the Italian Government had shown that monumental excavations were seldom fruitful in the discovery of portable works of art, which usually came to light in chance diggings. At Naples and Capua they were able to secure, at the start, a number of antiquities, which may be divided into two categories, — vases, mostly painted, and terra-cottas. The terra-cottas include some interesting fragments of the decoration of an archaic temple at Capua, especially some

fine painted Gorgoneia. Among the vases is to be noted a kylix of extraordinary beauty.

Leaving Naples at the close of November, Messrs. Clarke and Emerson first made a tour of investigation to Velia, Potentia, Metapontum, Siris, Herakleia, Sybaris, and Croton. Contrary to Lenormant's sanguine but mistaken notions, the site of the ancient Velia proved to be most unpromising, as the space enclosed within the old walls consisted largely of bare rocks with but a thin covering of earth. Dr. Emerson has prepared an exact plan of the *enceinte* of the city, with a detailed account of all that remains on the site. Metapontum was found to be reserved by the Government, under whose directions extensive excavations are being carried on, especially in connection with its two early temples. Dr. Emerson has made a study of the fragments of the temple sculptures, and Mr. Clarke will make use of a primitive fragment from the Chiesa di Sansoni, for the illustration of early Doric architecture. An account of these will appear in the "American Journal of Archæology." The awakened interest in the antiquities of Magna Græcia shown by the Italian Government is indicated by the establishment of a number of museums, notably a central Magna Græcia Museum at Tarentum, where archæological research is being conducted on a large scale, private digging being interdicted. Furthermore, a grant of 200,000 lire has been asked from Parliament for the excavation of the buried remains of Sybaris.

In visiting the ancient Croton Mr. Clarke studied the ruins of the Temple of Hera Lakinia, situated near by on a promontory now called from it, Capo alle Colonne. The land was private property; and permission to excavate having been obtained from the owner, it was determined that this undertaking should be made the main object of the expedition. A few words on the history of this temple will be sufficient to show its importance, already signalized by Lenormant.¹ It is perhaps the earliest, certainly the most famous, of the great sanctuaries of Southern Italy; and the traditions regarding it go back into the mists of the heroic age, when Æneas is said to have stopped here and dedicated an offering. During the flourishing period of the Greek colonies it became enormously rich, receiving gifts from all the great cities, who sent their *theori* every year to its celebration. The later temple was decorated with paintings by Zeuxis, and Hannibal placed in it the famous bronze bilingual tablet on which he inscribed, in Greek and Phœnician, the record of his campaigns. The magnificence of its architecture was well known, and is illustrated by the fact that its roof was entirely covered with marble tiles. The temple rose on a massive stone basement of enormous height, and faced the sea. Turned into a Christian church and dedicated to the Virgin, it remained practically intact until the beginning of the sixteenth century, when

¹ La Grande-Grèce, vol. ii. pp. 205-234.

Bishop Lucifero of Cotrone (1510–1521) tore it down to use its materials in building an episcopal palace. Only two columns were then left standing; of these one soon fell, leaving upright that which to-day marks the site. Even the larger part of the great blocks of the basement have been carried off for use in the piers of the port of Cotrone. Its ruins never have been illustrated, nor has any attempt been made to lay bare what of the temple remained underground. How little was known, even of the standing column, is shown by Lenormant's erroneous description, and his assigning the date of the building of the temple to about 600 B. C.

Mr. Clarke commenced work with a few men late in December, near the one standing column; and it soon appeared that the temple was not archaic, but belonged to the best period of Doric architecture. Of its lavish marble decoration and of its architectural members, many fragments were found, so that the most of the details, as well as the dimensions and proportions of the building, can now for the first time be accurately determined. A few extracts from Mr. Clarke's letters will best explain the course of the work:—

January 3.—“Our survey of the temple is nearly completed. This has been a work of the greatest interest and importance. The column was originally inclined, the lowest drum being higher without than within,—this inclination being in part equalized by the contrary slant of the bed-surface at the hypotrachelion. As far as I am aware, this

is the first instance of the kind elsewhere than at Athens. . . . The style of the building is by no means archaic, — as Lenormant reported, — but points distinctly to the very best epoch, — the last half of the fifth century. The peribolos wall we have not yet surveyed: its position is evident throughout its extent, and in places it still rises to the height of seven metres.”

January 12. — “At first our endeavor was mainly to determine the extent of the building. This proved possible; . . . but, throughout the greater part, even the lowest courses of the stereobate were torn up and carried away by the Bishop of Cotrone, Lucifero (1510–1521). Only the northeastern corner has remained intact. The temple was hexastyle, with a double range of columns upon the eastern front, and with fourteen columns upon each side. . . . To-day we have met with the first large blocks of the superstructure, — a cornice block, with finely preserved trunnels, a triglyph, a large piece of the tympanon cornice with a Doric cyma of great beauty, various pieces of the marble tiles of the roof, a fine marble cornice, with hawk-bill moulding, and minor bits; also two Greek coins of bronze, capable of identification.

“This was a magnificent temple, and it is wonderful that it has not hitherto been investigated. We are astonished at its lavish decorations of marble, — roof, gables, interior cornices, etc., — and it is not entirely impossible that we may yet find some inscriptions, or even sculptures.”

In a subsequent letter, dated January 16, Mr. Clarke announced the important discovery of four fragments of the marble gable-groups of the temple, which made it possible to identify three other pieces that had been previously found. At this time many interesting objects were found, including bronzes, terra-cottas, and parts of the architectural decoration. Before the end

of the month the excavations were, however, unfortunately interrupted by order of the Government. Mr. Clarke writes : —

“After the site of this building had been accurately surveyed by us, — a work which occupied nearly a month, — it was found to be desirable to undertake some digging, in order to determine the extent of the plan and the character of certain parts of the superstructure. Permission to do this was obtained from the owner of the ground, — indeed, of the entire Lakinian promontory, — Baron Luigi Berlingieri, Sindaco of Cotrone, a gentleman to whose friendly interest and furtherance the work is greatly indebted. Before beginning the digging, we suggested to him that notification of the intended excavations should be sent to the authorities at Rome. Against this step he not only protested, he actually made it impossible by declaring that, should we recognize the right of other officials than those of Croton to grant permission for excavating the site, he would withdraw that given by himself. It consequently became evident to us that this position was determined by a desire to uphold the laws obtaining in Calabria. The jurists of Cotrone, one of whom we consulted upon the point, hold that the decree published in Rome concerning archæological explorations — the so-called *legge Pacca* — is applicable only to the Roman provinces; Calabria, in this respect, still enjoying the privileges granted by the edicts of 1823. The owner of the ground sharing this view, and being himself the highest official in the district, it would have been futile for us to insist upon a contrary course. Moreover, the excavations at the temple were, in all that regarded the legal aspects of the case, undertaken, not by us Americans, who claimed no part of the discoveries as a right, but by Baron Berlingieri, Mayor of Cotrone, who, we might reasonably assume, would commit no illegal act. As if in premonition of

the question which has now arisen, that gentleman wrote in his official capacity to the Prefect of the Province, stating that he himself assumed all responsibility for the excavations. This document will be found on file at Catanzaro.

“The objects we had discovered were sequestered ; the greater number of them being taken, not from our hands, but from a dwelling of Baron Berlingieri adjoining the site of the temple. Many of them (such as fragile glass, and terra-cotta ornaments with delicate traces of painting) must have been broken and defaced by the stones and earth with which they were covered.”

Legal proceedings have been begun to test the validity of the claim of the Government to prevent excavations undertaken without its consent upon private property in Calabria. Should the position of Baron Berlingieri be sustained by the court, the investigations, now interrupted, will be renewed. But even if nothing more be done, sufficient materials have already been collected for a description much fuller and more accurate than any now existing of the most important monument of Doric architecture in Italy. The Baltimore Society, at a recent meeting, expressed, by a vote of thanks, its appreciation of the zeal, tact, and ability shown by Messrs. Clarke and Emerson in their work.

Mr. Clarke returned from Italy in March, and is now engaged upon the completion of his Report on the Investigations at Assos. It had been the hope of the Council that this Report might have been finished and printed during the past year ; but this was rendered impossible by the interruption occasioned by Mr.

Clarke's visit to Magna Græcia. A considerable part of the Report is already in type, and the members of the Institute may confidently expect the completion of the work in the course of the current year.

The Council greatly regret not to have received from Mr. Bandelier the final Report which they had reason to expect from him, but the delay in regard to it has not been without good reason. In October last Mr. Bandelier was commissioned by the Archbishop of Santa Fé to write a History of the Colonization and Missions of New Mexico, Arizona, Sonora, and Chihuahua, from the Spanish Conquest and Settlement of these regions to A. D. 1700. The work is to be offered to His Holiness Leo XIII., on occasion of the Pontiff's Jubilee. The preparation of it involved a residence in the City of Mexico for the purpose of studying the unpublished documentary material preserved in the archives there; and Mr. Bandelier rightly assumed that acquaintance with this material would be of great assistance in the preparation of his Final Report to the Institute. In December last he accordingly went to Mexico, whence he has lately returned, having made a thorough study of the contents of the civil and ecclesiastical records bearing on his subject, and having secured a vast mass of hitherto unprinted and unused documents, which supply him with original resources of the highest value for his work. He now expects to have the Report for the Institute ready

before next May; and there can be no doubt that it will form a very important addition to knowledge of the archæology and history of the southwestern regions of the United States.

During the coming year the Council believe that the objects of the Institute will be best promoted by limiting its efforts in the main to securing the permanent fund for the endowment of the School at Athens. To accomplish this end they urge the active personal co-operation of every member. By a general effort of the members the sum required can be raised with comparative ease. The Council ask from each such a subscription as he can afford, and such effort as he can contribute in obtaining subscriptions from persons not members of the Institute, but interested in promoting the higher education of the country and its nobler intellectual interests.

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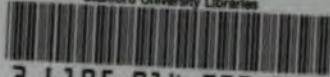
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