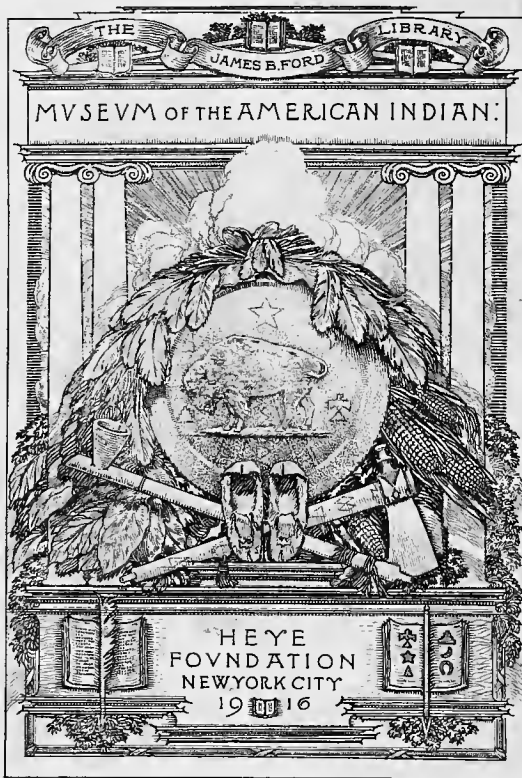


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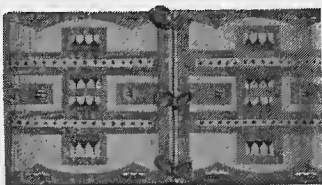




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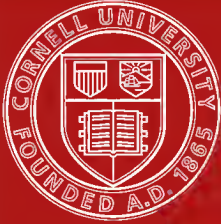


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A GENERAL VIEW OF THE ARCHEOLOGY OF THE PUEBLO REGION.

FY

EDGAR L. HEWETT.

FROM THE SMITHSONIAN REPORT FOR 1904, PAGES 583-605
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A GENERAL VIEW OF THE ARCHEOLOGY OF THE PUEBLO REGION.

By EDGAR L. HEWETT.

I. LIMITS OF THE REGION.

The term "pueblo region" has not yet been acceptably defined. As used in this paper it designates that portion of the United States over which are distributed the archeological remains and the living remnants of those aboriginal North American tribes which from their chief common characteristic, that of permanent substantial house building, received from the Spanish conquerors the name of Pueblo or town Indians. It embraces almost the whole of New Mexico and Arizona, with small portions of southwestern Colorado and southeastern Utah. There is probably no reason why the term should not be extended to embrace large portions of the states of Sonora and Chihuahua, in Old Mexico.

To determine the exact limits of the pueblo region is one of the tasks of American archeology that awaits completion. Special exploration with a view to the determination of these limits has not yet been undertaken. However, the archeological remains are of so conspicuous a character that the boundaries are approximately revealed. I accept the Pecos valley, in eastern New Mexico, with its tributary the Gallinas, as the eastern limit. Straggling ruins are found farther east, in Scott County, Kans., and in the Canadian valley, in Texas; but these are remains of temporary settlements. There is no well-established evidence of serious attempts by the aborigines to form permanent substantial settlements upon the "great plains." Those easterly remains of pueblo culture in the Gallinas valley near where the city of Las Vegas now stands and in the Pecos valley in the vicinity of the present Anton Chico were also comparatively transitory. The northern limit is less definite, but is approximately the northern rim of the San Juan Basin, in Colorado and Utah. Such pueblo settlements as were formed north of the San Juan-Grand divide—for example, those of the Lost Canyon

and others in the Dolores drainage—were of little importance. On the west and northwest the limit is the northwestern outline of the basin of the Rio Colorado. Pueblo settlements beyond this boundary were few. On the east side of the river typical pueblo culture flourished. Passing to the western side we find it gradually ceased to be characteristically pueblo. On the south the boundary as accepted in this paper is the southern rim of the Gila valley. This limitation is purely arbitrary, however, as traces of identical or but slightly differing culture extend much farther south.

An examination of the physiography of the frontiers of this culture is instructive. East of the Pecos and of the Rocky mountains are the vast unbroken grassy plains, the great cattle range of recent years, and the favorite buffalo range of earlier times. The buffalo afforded the principal food supply for the plains Indians. It was an unstable source of subsistence. This, in primitive life, induces a correspondingly mobile population, whereas a culture of the Pueblo type is based on sedentary habits. Physiographic conditions account for the arrest of Pueblo culture east of the Pecos. Its failure to extend west of the Colorado is likewise a matter of physiography, for along the lower course of this river absolute aridity prevented settlement, while farther up the great chasm of the Grand Canyon barred migration. The reason for the arrest of the Pueblo frontier on the north with the San Juan-Grand watershed is not so apparent. To the northeast was an excellent game country, full of warlike hunting tribes, forming an effective barrier in that direction, but to the northwest through Utah and Nevada the physiographic conditions were altogether favorable to the Pueblo culture, and an open gateway in that direction is found east of the Colorado. On the south the Gila does not constitute either a physiographic or ethnographic boundary, since similar conditions extend down into Mexico. By common usage the name "Pueblo" is applied only to tribes within the United States, disregarding the ethnic similarities of north Mexican tribes. Here we find natural gateways for the entrance of early immigrants into Pueblo territory from the Rio Grande at the southeast and along the Gila and its tributaries from the southwest.

There is thus inclosed within the boundaries above described a physiographic area which is accurately characterized by the term "semiarid," the limits of which are approximately coextensive with the limits of the Pueblo culture. The climatic conditions are peculiarly definite. Dryness is the prevailing condition. Precipitation is very unequally distributed throughout the year. Heavy rainfalls of from a few hours to some days' duration are followed by months devoid of moisture. The character of the soil is such that the effects of rainfall rapidly disappear. Absorption, evaporation, and drain-

age proceed with great rapidity. Between the Pecos and the Colorado are extensive plateaus of inferior grass lands, timbered mountain ranges, narrow arable valleys, and vast stretches of sandy desert. Much of the area exceeds a mile above sea level. The country was probably always deficient in game, neither were wild fruits plentiful, nor was any indigenous food supply abundant.

These physiographic conditions exercised a coercive influence over the primitive culture of the Southwest, making fixed abodes and an agricultural basis of food supply necessary. To the east and north nomadic hunting tribes followed where the food quest led them. They shunned the southwestern desert for the same reason that the buffalo did. Navahoes, Comanches, and Apaches did not invade this region until comparatively recent years, for obvious reasons. In the economic systems of primitive men we find the germs of up-to-date commercialism. Wealth is obtained by producing it and by dispossessing others of it. The tribes mentioned belonged to the predatory class. As game was scarce in the Southwest, there was no reason for their going there until it became worth while for predatory reasons.

The true indigines of the Southwest were necessarily agriculturists. Coming into a region where game and wild fruits afforded insufficient subsistence, they, probably partly from previous experience and partly from immediate necessity, were constrained to supplement their food supply by the cultivation of food plants. The preparation of ground for agriculture and the necessary devices for the utilization of water for irrigation induced a comparatively permanent abode and substantial house building. Settlements, with rare exceptions, were perforce clustered in narrow valleys along waterways, or in cliffs, or on mesa tops, within reach of streams or perennial springs.

Thus the indigines of the Southwest were and are Pueblos (town builders) through the coercion of physiographic environment. As an ethnic division they are a most indefinite one, embracing several well-established linguistic stocks and numerous minor dialectic groups, which become more numerous the farther back they are traced. Every existing Pueblo tribe that has been studied has been found to be composite, formed by combination of sundry ethnic groups more or less amalgamated. Incoming bands, regardless of blood or previous condition, if they came seeking permanent abode, became Pueblos, whether they amalgamated closely by blood with previous settlers or not, by virtue of their enforced adoption of the mode of life made necessary by the physiographic conditions of the region. Similarity of house life, of food, of method of acquiring the same, of inventions necessary to food production, of utensils for conserving and transporting the scant and precious water supply, of

experience with the elements and soil, of suffering from famine and foes, in time led to a degree of like-mindedness which found corresponding expression in religious belief, in esthetic feeling, in social organization. The Pueblo tribes, while remaining unlike as to language and somatic characteristics, naturally became alike in general and specific culture. Some of these elements of likeness may be stated as follows: They were all producing rather than predatory tribes; they preferred sedentary to nomadic life; they preferred stable rather than transitory homes; they developed a societary system founded on "mother right;" they evolved a highly complex theogony, characterized by elaborate rain and growth ceremonials; they developed highly the art of pottery with elaborate symbolic ornamentation.

The name "Pueblo" is thus almost without ethnological significance, having no reference to tribal or linguistic relationship, but relating mainly to a type of culture that developed in response to the influence of a definite physiographic environment, the limits of which were fixed by nature as above set forth.

II. CLASSES OF ARCHEOLOGICAL REMAINS.

A much greater variety of archeological remains exists in the Southwest than in other parts of the United States, owing to the permanence of abodes, the adaptation of climate to the preservation of artifacts usually perishable, and the comparatively uninhabited condition. While in other parts of the country little save the contents of graves, consisting of stone implements, pottery, and osseous remains, now exist, and the majority of these lost or disturbed by the progress of agriculture, here we find not only graves and all the usual mortuary remains, but extensive remains of houses in every stage of preservation, with all the appurtenances of domestic life preserved therein, and numerous shrines, ceremonial deposits, and an extensive paleography displaying the esthetic and religious life.

The ruins of domiciliary structures are capable of division, not on structural differences, but by situation, into the two general classes—pueblos and cliff dwellings. The first embraces all those multiple-chambered structures, either single or in clusters, that are situated on mesas or in valleys independent of support from natural rock walls. The second includes those that are wholly or in part embraced within cliffs, built against cliffs, or situated on ledges under overhanging cliffs, either single or multiple chambered. The location of the village of a pre-Columbian sedentary tribe was selected primarily with reference to water and arable lands. This was modified in time by the necessities of defense against incoming predatory enemies, which multiplied as the Pueblos accumulated food supplies sufficient to make them desirable prey. The kind of a house to be built was

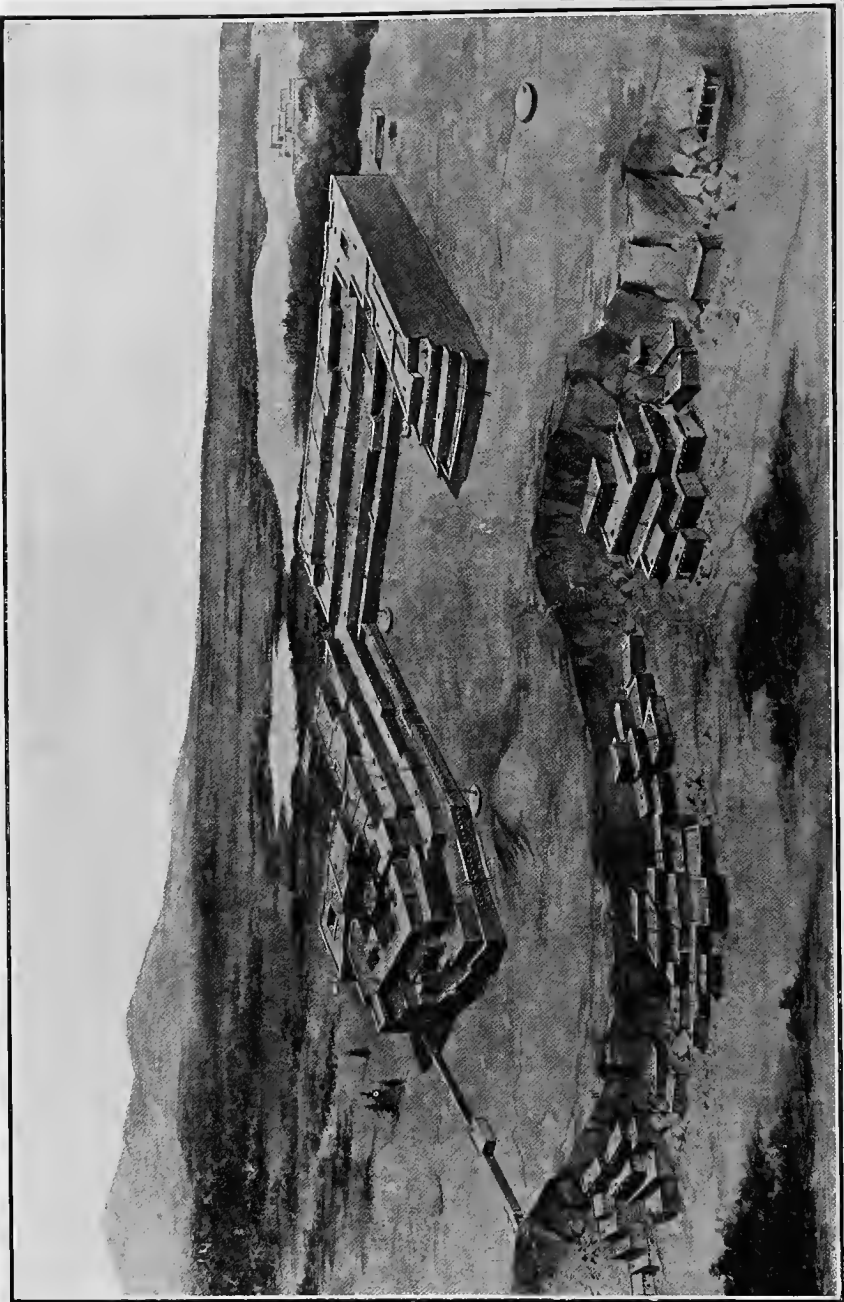


FIG. 1.—RUINS OF PUYE PUEBLO, PAJARITO PARK, NEW MEXICO.



FIG. 2.—CLIFF DWELLINGS IN SANDIA CANYON, PAJARITO PARK, NEW MEXICO (RESTORED).

Restoration by Kenneth M. Chapman.



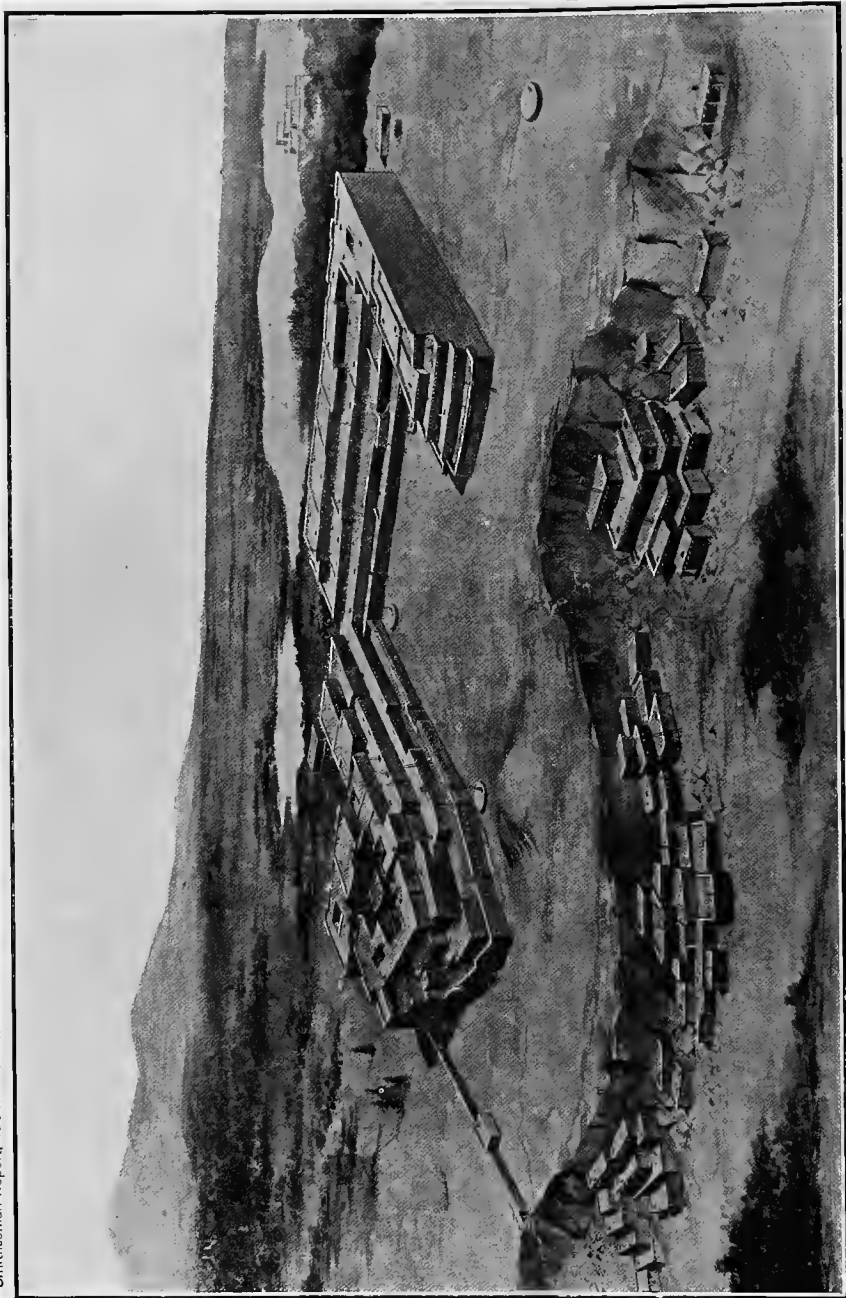
determined by the geology of the location. If in the open, sandstone or tufa blocks, bowlders, and adobe were used, as furnished by the environment, and the structure timbered with what nature supplied. If considerations of defense necessitated a cliff dwelling, its character was a geological question. Great natural caves and recesses under overhanging cliffs were selected, and houses not structurally different from the pueblos in the open were built within them. Such formations occur numerous throughout the Rio Colorado drainage area. Accordingly we find this class of cliff dwellings distributed over the valleys of the San Juan, Little Colorado, Gila, and their tributaries.

In cliffs of volcanic tufa, or other material sufficiently friable to permit of easy working with stone tools, dwellings were excavated. Small natural caves in such regions were utilized as dwellings, with or without further excavation, and both with and without masonry. Large open caves were sometimes walled up. Interior walls were sometimes built. Houses not structurally unlike pueblos in the open were built in front of these excavated rooms against the cliffs. The name "cavate dwelling" (originally proposed by Professor Mason) has long been applied to excavated cliff dwellings. They are distributed over the four drainage basins of the pueblo region, being most numerous on the western tributaries of the Rio Grande, the northern tributaries of the San Juan, and the northern tributaries of the Gila, particularly the Rio Verde.

III. DISTRIBUTION.

The distribution of the Pueblo culture, as disclosed by archeological remains, was determined primarily by drainage. The region lies on both sides of the Continental divide. The eastern portion is drained by the Rio Grande and its tributaries; the western by three principal tributaries of the Rio Colorado, viz, the San Juan, the Little Colorado, and the Gila. These four drainage basins constitute the primary seats of Pueblo culture.

The primal needs of primitive man are water, food, and shelter. In the Southwest, water was first in importance. Where water was, food was possible. Such game as the country supported frequented waterways and springs, and here only were to be found the conditions necessary to the production of food plants. Accordingly, the extension of the indigenous culture was directed by the drainage, and so thoroughly did it overspread the region under consideration that there is not a valley of any consequence from the Pecos to the Colorado, and from the San Juan to the Gila, that is without its characteristic archeological remains. Following is a list of the principal valleys, basins, canyons, and mesas containing ruins:



PUEBLO OF TCHIREGE, PAJARITO PARK, NEW MEXICO (RESTORED).
Restoration by Kenneth M. Chapman.

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1. Rio Grande Drainage.

Main valley from El Paso to Embudo Canyon.

Eastern tributaries :	Western tributaries—Continued.
The upper Pecos.	The Alamo.
The Gallinas.	The Pajarito.
The Tunque.	The Rito de los Frijoles.
The Galisteo.	Cañada de Cochiti.
The Pojoaque.	The Puerco.
The Nambe.	The Cebolllita.
The basin of the Manzano salt lakes.	Montezuma Mesa.
The Tajique.	The Ojo Caliente.
The San Pedro.	The Chupadero.
The Santa Fe.	The Sandia.
The Tesuque.	The Bravo.
The Santa Cruz.	Cañada de la Cuesta Colorada.
Western tributaries :	The Jemez.
The Chama.	The San Jose.
The Santa Clara.	The Alamosa.
	The Mimbres (inland).

Numerous dry creeks of the Acoma Plateau and Magdalena district.

2. San Juan Drainage.

Main valley from source to junction with Pine Creek.

Southern tributaries :	Northern tributaries—Continued.
In New Mexico—	In Colorado—Continued.
Canyon Largo.	The Mancos.
Compañero Canyon.	Moccasin Canyon.
Gobernador Canyon.	Ute Canyon.
Chaco Canyon.	Johnson Canyon.
In Arizona—	The Yellowjacket.
The Chinlee.	La Plata.
The Hospitito.	The Mesa Verde.
Canyon del Muerto.	Navaho Canyon.
Gothic Wash.	Ruin Canyon.
Marsh Pass.	The McElmo.
Canyon de Chelly.	In Utah—
The Carrizo.	The Hovenweep.
Monument Canyon.	The Recapture.
The Nashlini.	Butler Wash.
Paute Canyon.	Grand Gulch.
Northern tributaries :	The Montezuma.
In Colorado—	The Cottonwood.
Las Animas.	Comb Wash.

3. Little Colorado Drainage.

Main valley, entire course.

Northern tributaries :	Northern tributaries—Continued.
The Moencopie.	The Zuñi.
Corn Creek.	Southern tributaries :
The Puerco.	Silver Creek.
The Carrizo.	Walnut Canyon.
The Hopi Plateau.	The Cheylon.
Le Roux Wash.	Chavez Pass.
Cottonwood Wash.	

4. Gila Drainage.

Main valley from source to below Phenix.

Northern tributaries :

The Verde.
 Oak Creek.
 Clear Creek.
 The East Verde.
 The Tonto.
 Canyon Creek.
 The Carrizo.
 The Bonito.
 The San Carlos.
 The San Francisco.
 The Tularosa.
 The Cottonwood.

Northern tributaries—Continued.

Beaver Creek.
 Pine Creek.
 The Salt.
 Cherry Creek.
 The Cibicu.
 White Mountain Creek.
 The Pinal.
 Eagle Creek.
 The Blue.

Southern tributary :

The San Pedro.

IV. PRESERVATION.

Present state.—The present state of preservation of the southwestern ruins depends upon several conditions. Cliff dwellings, because of their sheltered situation, are much better preserved than pueblos in the open. Of the former class those of the excavated type are naturally the best preserved, since in many of them there are no artificial walls at all and deterioration occurs only with the falling away of the natural rock. This form of deterioration does occur to a destructive extent in many places and manifestly is not preventable, but even in the absence of all protective measures thousands of specimens of this class of domiciles would remain in a state of perfect preservation for ages. The pueblo-like cliff dwellings being situated under heavy overhanging ledges are well protected from the elements and unmolested would endure for centuries. But their destruction seems to have been made the peculiar pastime of a certain class of human beings. The early explorers of the Mancos Canyon would now find, in many cases, unrecognizable heaps of stone where thirty years ago were well-preserved structures. The excavation of cliff dwellings without due regard to the preservation of walls should be made a grave misdemeanor. The preservation of these remains is now almost entirely a matter of protection from vandals, since they are quite perfectly sheltered from the elements.

The ruins of pueblos are exposed not only to vandalism but also to the constant destructive effects of the weather. In most cases the buildings are almost totally destroyed, only small fragments of walls remaining standing above the débris. Noted exceptions to this are illustrated in accompanying plates. The height of walls bears little relation to the age of ruins. The difference in the state of preservation is due principally to the character of the material used in construction and the degree of exposure to vandalism. In some cases walls have been taken down by the settlers and the stones used in the

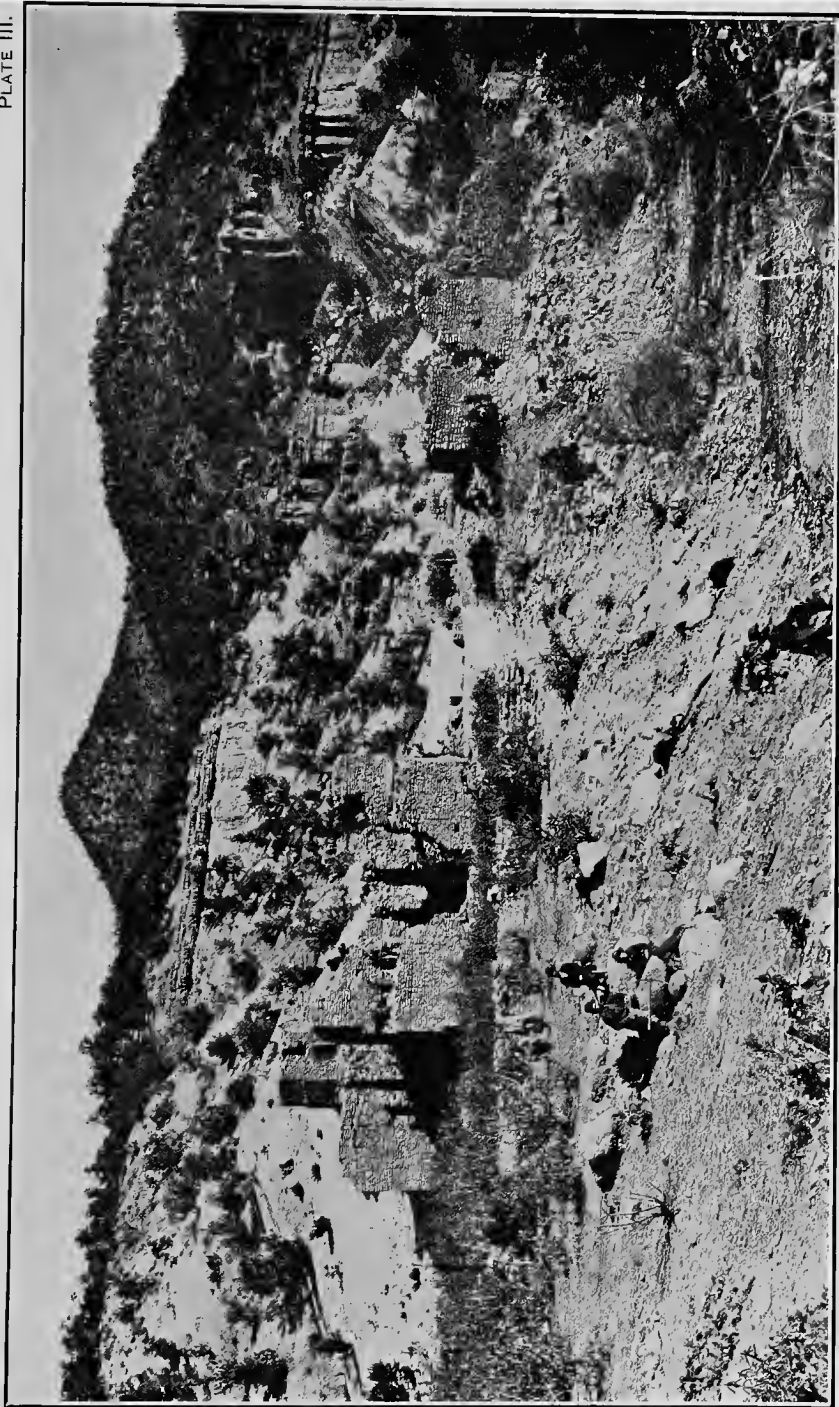
construction of buildings, corrals, etc. Much destruction was wrought in earlier times by the removal of the timbers for firewood by settlers and passing campers, thus causing the collapse of all walls above the first story. Ruins in the treeless desert have suffered especially from this cause. The material used in building has much to do with the state of preservation. Other things being equal, the pueblos that were built of small bowlders and adobe were the first to succumb to the elements and are most reduced, the convex surfaces of the stones affording little stability to the walls as the plastering and chinking material weathered out. The Rio Grande pueblos were mostly of this class and are reduced to mounds. Somewhat more durable were those built of tufa blocks as in the Pajarito Park pueblos. But here also the imperfectly flattened surfaces of the stones are readily freed by the weather from the supporting mortar and chinking stones, and collapse of the walls readily occurs. The best preserved of all are those built of laminated sandstone as in Chaco Canyon. The flat slabs fit together perfectly with but little mortar or chinking to weather out, so that the walls, even in the absence of timbers, remain intact until thrown down by human agency.

Future preservation.—The subject of preservation of American antiquities is now receiving an amount of attention never heretofore accorded it. For a quarter of a century certain thoughtful people have been calling attention to the matter and the continuous publication of archeological and ethnological literature is bearing fruit. Learned societies, scientific and educational institutions, legislative bodies, and public-spirited individuals are beginning to devote to the question consideration commensurate with its importance. The problem is an intricate one. A more general diffusion of information concerning it is urgently needed.

Of the archeological remains in the Southwest, probably nine-tenths are on lands yet owned or controlled by the Government of the United States, mainly upon forest reserves, Indian reservations, lands withdrawn from entry for special purposes, military reservations, and unappropriated public lands. So the question may still be dealt with through the National Congress and Executive Departments. In some cases it may become necessary to interest States and Territories in preservative measures, and in others private owners, railroad companies, and companies owning land grants will need to be impressed with the importance of preserving these remains for archeological research.

Preservation must be :

- (1) Permanent in cases where the condition and historic or ethnic significance of the ruins give them special educational value.
- (2) Temporary in the case of all aboriginal buildings, graves, and other archeological remains not included in the first class, the pro-



RUINS OF PUEBLO OF GIUSEWA AND MISSION OF SAN DIEGO, JEMEZ VALLEY, NEW MEXICO.



FIG. 1.—PUEBLO RUINS, MONTEZUMA MESA, NEW MEXICO.

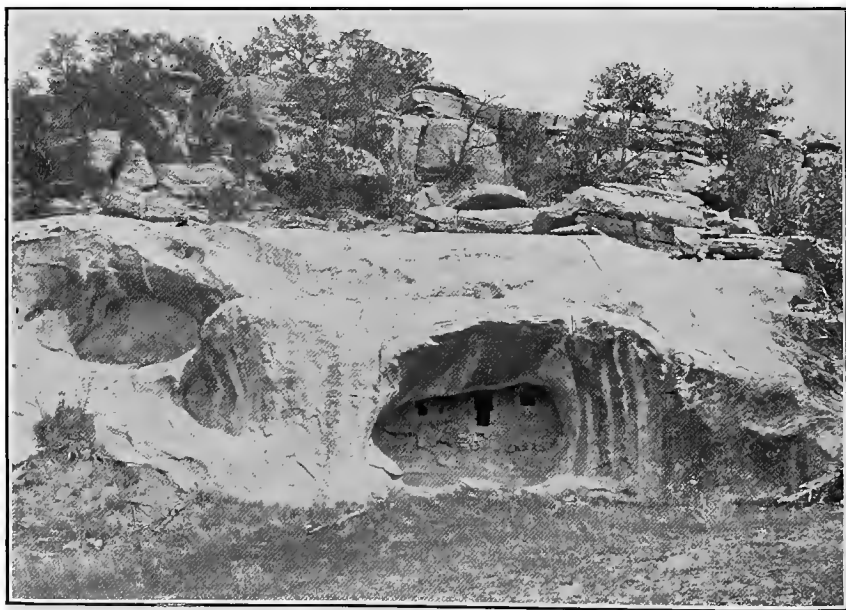


FIG. 2.—CLIFF DWELLING, MONTEZUMA MESA, NEW MEXICO.

tection to be afforded until all data of importance to science have been investigated and all artifacts in connection therewith removed to museums for permanent preservation.

Preservation is to be secured:

(1) Through Congress: Under special legislation creating national archeological reservations or parks and general legislation establishing a system of custodianship and administration over all archeological remains on the lands owned or controlled by the Government of the United States. Up to date but one measure looking toward the preservation of antiquities has ever been passed by the National Congress, and this provided for the preservation of a single building—Casa Grande, in Arizona. As early as 1896 a general bill was prepared and presented to the National Congress and similar measures have been introduced since from time to time down to the 58th Congress, but none have passed.

(2) Through Executive Departments: By the exercise of powers inherent in such departments under the Constitution and General Statutes. With the single exception above noted, all that has been accomplished by way of protection of antiquities has been by this method. It is exceedingly fortunate that, as will be seen further on, so much can be provided for incidentally in connection with the administration of our great economic, Indian, and military interests, thus involving but little additional expense.

By virtue of section 441, United States Revised Statutes, the care and custody of the public lands is vested in the Secretary of the Interior, and section 453 declares that the Commissioner of the General Land Office shall perform, under the direction of the Secretary of the Interior, all executive duties in any wise respecting such lands. There can be no question that this statute places upon the Department of the Interior and the General Land Office the obligation to protect the archeological remains that are upon the public lands as definitely as it does any other values thereon.

In the exercise of the power thus conferred a policy has developed in the General Land Office and Office of Indian Affairs, under the Department of the Interior, that is highly commendable as far as it goes. This policy utilizes forest supervisors and rangers, special agents, Indian school superintendents, Indian agents, additional farmers, and police in the protection of ruins in connection with and as one of their regular duties for the avowed purpose of preserving them for scientific investigation. It establishes the liberal policy that any competent scientist who desires to place the material secured in a public museum will be authorized by the Department of the Interior to examine ruins, but that no person will be permitted to excavate them for the purpose of acquiring specimens for traffic or private gain, and that willful destruction of historic and prehis-

toric landmarks must cease. Especially noteworthy is the emphasis laid by the Commissioner of the General Land Office on "the importance of furthering in every way possible researches with a view to increasing the knowledge of such objects and aiding the general advancement of archeological science." Every thinking man will uphold this policy most cordially.

As above stated, practically all that has been accomplished thus far has been through the exercise of powers inherent in the executive branches of the Department of the Interior. This authority is readily invoked, and in the past has responded with great promptness to every reasonable recommendation. By this means the following protective measures have been secured:

1. Through the General Land Office:

(a) All ruins on forest reserves^a have been placed under the care of the regular forest rangers. This includes the vast number of ruins on the Gila Forest Reserve, the Black Mesa Forest Reserve, the San Francisco Mountains Forest Reserve, and a considerable number on the Grand Canyon Forest Reserve.

(b) The Pajarito Park, in New Mexico; the Mesa Verde Park, in Colorado, districts containing vast numbers of prehistoric ruins, and a tract on which stands El Morro or Inscription Rock, in New Mexico, a most important historic landmark, have been withdrawn from disposal under the public-land laws and recommended for permanent preservation as national parks, as has also the petrified forest in Arizona, withdrawn primarily for preservation as a natural wonder, but also containing important ruins.

(c) The proposed Jemez and Taos forest reserves, in New Mexico, and the proposed Rio Verde Forest Reserve, in Arizona, have been withdrawn from entry or disposal. This will incidentally preserve a vast number of important ruins.

(d) The ruins situated on unappropriated public lands have been held to be subject to the authority of the Department of the Interior and orders have been issued through special agents prohibiting injury and unauthorized excavation.

2. Through the Office of Indian Affairs:

(a) Special custodians have been appointed for ruins in Canyons del Muerto and de Chelly on the Navaho Reservation in Arizona; for those on Mesa Verde on the southern Ute Reservation in Colorado, and for those on the Zuñi Reservation in New Mexico.

(b) The office prohibits all unauthorized persons from entering Indian reservations and despoiling ruins or carrying away remains of antiquity.

^a Jurisdiction over forest reserves transferred to Bureau of Forestry, Department of Agriculture, February 1, 1905.

(c) Order of February 11, 1905, prohibits licensed Indian traders from dealing in prehistoric wares, thus removing from the Indians and other persons the temptation to despoil the ancient cemeteries for the sake of the small profits to be derived therefrom. This corrects an abuse that has been very prevalent and disastrous.

Up to the present time there has been no coordination of the efforts of the various departments of government along this line; no general supervision is exercised; no systematic reports on the condition of the ruins are required; no system for regulating excavations and the disposition of specimens exists. The matter should no longer be dealt with sporadically. What is needed is a comprehensive system of administration and regulation for the whole subject.

Measures for the preservation of antiquities can not be intelligently framed without consideration of their situation with reference to ownership or jurisdiction. In this respect all those of the Pueblo region may be classified as in the following list. Below each class I have indicated the executive officer having jurisdiction over the class of lands named and necessarily of all antiquities thereon.

1. Those on national reservations or parks:
The Secretary of the Interior.
2. Those on forest reserves:
The head of the Bureau of Forestry, under the Secretary of Agriculture.
3. Those on Indian reservations:
The Commissioner of Indian Affairs, under the Secretary of the Interior.
4. Those on military reservations:
The Secretary of War.
5. Those on unappropriated public lands:
The Commissioner of the General Land Office, under the Secretary of the Interior.
6. Those on lands withdrawn from entry for special purposes:
The Commissioner of the General Land Office, under the Secretary of the Interior.
7. Those on State lands.
8. Those on private lands (railroad lands, grants, homesteads, etc.).

In the appended list of important districts and sites the jurisdiction if known is indicated.

The first class includes at present only Casa Grande in Arizona, but important additions to this class are contemplated by certain bills that have been before Congress for some years. The protection of ruins in such reservations or parks is always adequately provided for by special service.

The second class, those on forest reserves, includes, as will be seen by reference to the list, a large proportion of the most important ruins. By act of Congress of February 1, 1905, the administration of forest reserves was transferred from the Commissioner of the General Land Office, Department of the Interior, to the forester and

chief of the Bureau of Forestry, Department of Agriculture. Forest reserves are constantly patrolled by a force of forest rangers, and the policy developed in the General Land Office of making it the duty of these officials to protect ruins from despoliation is continued under the Bureau of Forestry. This is all that could be desired. It may be said that ruins of this class are the most fortunately situated of all, for they are no longer liable to alienation by sale or entry of the lands, and are adequately policed, with little or no expense for special service. Large additions will be made to this class when the proposed Jemez, Taos, and Rio Verde forest reserves are established.

The third class, those on Indian reservations, includes a large proportion of the most important sites. The Office of Indian Affairs fully recognizes the obligation to protect the ruins and prevent unauthorized excavation, and is, moreover, furnished with appropriations and clothed with authority to utilize the same for the employment of such additional service as is necessary. Special custodians are employed in districts of unusual importance, and this service will doubtless be extended as need therefor is shown. It may be said that all ruins that come under this class are in a position to be adequately protected.

The fourth class, those on military reservations, are not numerous, and the attention of the War Department has not of late been called to the necessity of protecting them. Undoubtedly this Department would take the necessary steps if advised of the desirability of the same, and it doubtless has facilities for effective custodianship without providing special service therefor.

The fifth class, those on public lands, are quite numerous, but not nearly so numerous as has been supposed. The inadequacy of all general archeological measures that have been proposed heretofore, so far as I have been able to determine, lies fundamentally in the fact that they have not taken cognizance of the legal definition of the term "public lands." The courts have held the term "public lands" to signify the Federal lands lying open on the market for preemption or homestead, and that when the Government has reserved certain holdings from preemption they ceased to be "public lands."^a Thus limited, class five will probably not include over 15 per cent of all the ruins on lands owned or controlled by the Government of the United States, and on the list of important districts and sites it will be seen that very few fall within this category. These lands, with everything situated thereon, are constantly being alienated by preemption, railroad selections, and lieu selections. Furthermore, with

^a Oral opinion rendered by Judge Wellborn in civil suits in southern district of California against A. H. and L. A. Blassingame. See also *United States v. Tygh Valley Land and Live Stock Company* (76 Fed. Rep., 693).



FIG. 1.—RUINS OF HUNGOPAVI, CHACO CANYON, NEW MEXICO.



FIG. 2.—RUINS OF KINKLIZHIN, NEAR CHACO CANYON, NEW MEXICO.



FIG. 1.—RUINS OF KINKLETSOI, CHACO CANYON, NEW MEXICO.



FIG. 2.—CLIFF DWELLING, MESA VERDE PARK, COLORADO.

the admission of New Mexico and Arizona as States, about 23,000,000 acres of public lands within their borders will pass to those Commonwealths, and their legislatures will have to be invoked for the protection of ruins thereon. There are few, if any, remaining cases where it is desirable that agricultural or otherwise useful lands should be withheld from preemption or other disposal because of the ruins situated upon them. Where such cases do exist, it would be possible for the General Land Office, if informed by recognized authority, to withhold by temporary withdrawal the smallest acreage adequate to the protection of the buildings, cemeteries, etc., until excavated and reported on, after which the tracts should be released. There are several important isolated sites and some important districts situated on lands completely worthless for agricultural or other economic purposes which should be withdrawn by the General Land Office, since any preemption of them would be solely for the purpose of securing possession of the antiquities thereon in violation of the spirit of the land laws. Cases in point are the Chaco Canyon ruins, in northwestern New Mexico, and those of Montezuma Mesa, southwest of Acoma. The status of ruins on public lands, as that term is here used, is not at all satisfactory. The General Land Office has done what was possible by way of withdrawal and recommendation for Congressional action in cases of exceptional importance in which no economic interests were involved, and has prohibited unauthorized excavation, but it has been ruled that under no existing provision of law can funds be used to pay for custodianship. Accordingly the protection afforded must of necessity be inadequate. A slight amendment to the sundry civil bill would remedy this.

Those of the sixth class, situated on lands withdrawn from entry or other disposal for special purposes, are very numerous, as may be seen from the list of important districts and sites. It is to be hoped that all in this class may be speedily transferred to classes 1 and 2, as contemplated by their withdrawal. With the establishment of Pajarito National Park and the Jemez and Taos forest reserves the efficient and permanent protection of a large proportion of the most important of the ruins of the Rio Grande drainage will be assured. The creation of the Mesa Verde National Park and saving, by withdrawal, of as many of the Chaco Canyon pueblos as are on lands still open to preemption, would insure the preservation of a fair proportion of the important sites of the San Juan drainage. With the establishment of the Rio Verde forest reserve all the great groups of the Gila drainage will have been brought incidentally under adequate permanent custodianship. The status of ruins of the sixth class is more satisfactory than those of the fifth. They are preserved from alienation by preemption or other disposal and warning notices

are kept posted thereon, prohibiting injury and unauthorized excavations, but these lands are not policed for the same reason that those of class 5 are not. However, the orders of the Department of the Interior have been effective to a great extent and ruins on withdrawn lands are suffering but little from vandalism.

The seventh class, those situated on State lands, is inconsiderable at present, but with the admission of the Territories and subsequent segregation of their lands this class will require consideration. As segregation will not, as a rule, be in large areas, but by single sections, large districts of ruins will not be affected, but important isolated sites will be, and the State governments should then be invoked to exercise protective authority over them.

The eighth class, those on private lands, includes many important sites. The number of private land grants, in New Mexico especially, is very large, and some of them are covered with important ruins. Many are on railroad selections and some on small holdings or homesteads. Some owners of homesteads and grants realize the importance of preserving these ruins for scientific research and exercise due custodianship over them. Others use the stones for building material, and timbers, if any, for firewood.

The above is as comprehensive a presentation of the status of archeology in the pueblo region as I am capable of making within the limits set for this paper. It is based on many years of personal residence and field work in the Southwest, in connection with the researches of all other investigators of the pueblo field, the results of which I have freely availed myself of. During the past six months I have had the opportunity to give considerable attention to the phases of the subject dealt with in this paper, for which the resources of the General Land Office, the Office of Indian Affairs, the Bureau of Forestry, and the Bureau of American Ethnology have been most cordially placed at my disposal. I feel that my conclusions are at least not hastily drawn.

V. SYNOPSIS OF IMPORTANT DISTRICTS AND SITES.

In this arrangement I have endeavored to point out only those archeological districts and special sites which, by reason of their character, situation, state of preservation, or ethnic significance, are particularly worthy of investigation. The list is by no means a complete one. Doubtless many are omitted that are as important as those named, and it is to be remembered that every aboriginal site or object is of sufficient importance to warrant investigation.

In order to indicate, when known, how the various sites are located with reference to jurisdiction, I have used the following abbreviations:

- Nat. Res., situated on national reservation or park.
 For. Res., situated on forest reserve.
 Ind. Res., situated on Indian reservation.
 Mil. Res., situated on military reservation.
 Pub. L., situated on public lands.
 With. L., situated on withdrawn lands.
 Pri. L., situated on private lands.

The asterisk is used to indicate sites of sufficient importance to demand permanent preservation.

I.—THE RIO GRANDE DRAINAGE.

1. In Upper Pecos Valley :
 - * Pecos, Ind. Res.
 - Seyupa.
 - Tonchun.
 - San Antonio.
2. About the Salt Lakes of the Manzano :
 - * Tabira (Gran Quivira) Pri. L.
 - Quarra.
 - Abo.
 - Tajique.
5. In the Galisteo Basin :
 - Yamphamba (San Cristobal).
 - Ipera (San Lazaro).
 - Tagewinge (Galisteo).
 - Hishi (Pueblo Largo).
4. In the San Pedro Basin :
 - Tunque.
 - Paako or Kukua, Pri. L.
5. In the Santa Fe Basin :
 - Tsinatay (La Bajada).
 - Tsiguma (La Cienega).
 - Kuaka.
 - Knapoge (Ft. Marcy) Mil. Res.^a
6. In the San Ildefonso Basin :
 - Sacona, Ind. Res.
 - Kyamunge, Ind. Res.
7. In the main valley of the Rio Grande :
 - Katishtya (Old San Felipe) Ind. Res.
 - Perage (Old San Ildefonso) Ind. Res.
 - Puaray.
 - Kuaua.
8. In the Chama Basin :
 - Tsawari.
 - Houiri, Pri. L.
 - Sepawi.
 - Homayo, Pri. L.
9. The Taos region ^b With. L. :
 - Numerous sites in the vicinity of Taos and Picuris.

^a Ceded to the city of Santa Fe.

^b This is partly included in the lands withdrawn for the proposed Taos Forest Reserve.

The majority of the above (1 to 9) are sites occupied within the last four centuries and abandoned at intervals from the time immediately preceding the Spanish occupation down to 1838. The years immediately following 1680 were particularly disastrous to the Rio Grande Pueblos. Archeological research at these sites should be fruitful in throwing light upon the first influences of the exotic civilization upon the indigenous tribes. They are all ruins of considerable magnitude, but in many cases reduced to mounds.

10. * Pajarito Park,^a With. L.:

Shufinne.

Otowi.

Puye. (Plate I, fig. 1.)

Tsankawi.

Cliff dwellings of Shufinne Mesa.

Cliff dwellings of Puye Mesa.

Cliff dwellings of Chupadero Canyon.

Cliff dwellings of Sandia Canyon. (Plate I, fig. 2.)

This is strictly a prehistoric district and archeologically one of the richest in the Pueblo region. The cliff dwellings are of the excavated type and exist in vast numbers, almost every southern escarpment being honeycombed with them. Besides the identified pueblo ruins named, several others of almost equal importance and hundreds of minor ones are scattered over the district. The permanent reservation of this tract will preserve intact a fairly complete exhibit of the prehistoric civilization of the Rio Grande Valley. This is now assured, for it falls within the limits of the proposed Rio Jemez Forest Reserve, and will in due time come under the custodianship of the Bureau of Forestry if it does not become a national park. The only collections that have been made from this district are in the museum of the New Mexico Normal University at Las Vegas.

11. On Ramon Vigil Grant,^b Pri. L.:

(Tewa; Tchire, bird; ge, house = house of the bird people: Spanish, Pajarito, a little bird.)

* Tchirege. (Plate II.)

Cliff dwellings of Pajarito Canyon.

Navakwi.

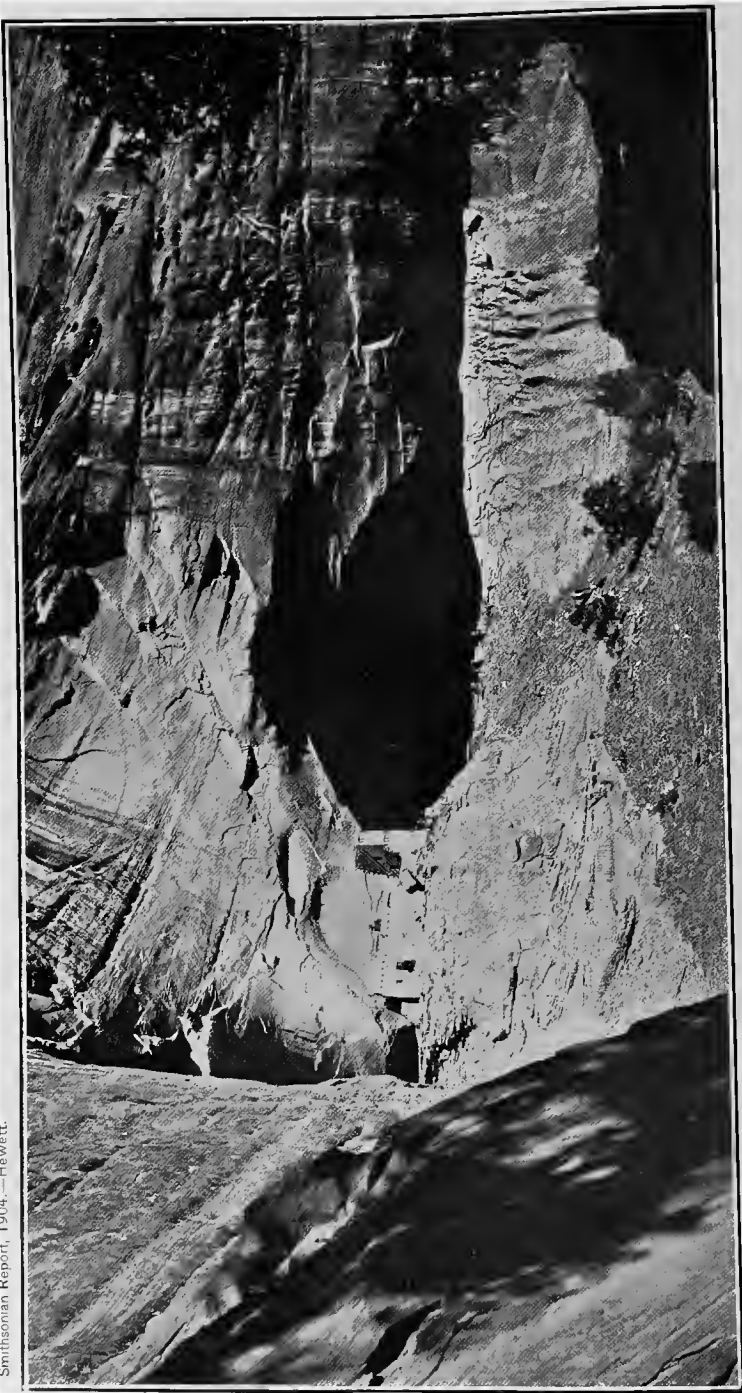
Numerous large and small pueblos of Mesa del Pajarito.

^a J here restrict the name Pajarito Park to the district 10 miles long by 4 wide that is under withdrawal and consideration for a national park. (H. R. 7269, 58th Cong.) As originally proposed and withdrawn, it was much more extensive, and received its name from what was the central geographical feature of the entire district, viz, Pajarito Canyon. This has since been found to be largely on Ramon Vigil Grant, which was almost surrounded by the proposed park. As the lines are now drawn, it creates Pajarito Park with the "Pajarito" left out.

^b This is the original Pajarito Park. The value of the ruins is appreciated by the owners and they are under proper custodianship.



CASA BLANCA, CANYON DE CHELLY, ARIZONA.



CLIFF DWELLING AND MUMMY CAVE, CANYON DEL MUERTO, ARIZONA.

12. Cochiti district,^a With. L. :
 * Tyuonyi.
 Pueblo Viejo.
 * La Cueva Pintada.
 Haatse.
 Kuapa.
 * Stone lions of Potrero de las Vacas.
 * Cliff dwellings of Rito de los Frijoles.
 Cliff dwellings of Cañada de la Cuesta Colorada.
13. In upper Jemez Valley,^b With. L. :
 * Giusewa and Mission Church of San Diego. (Plate III.)
 Large number of important pueblo ruins in valley and on adjoining mesas.
14. In the San Jose Valley :
 San Mateo, Pri. L.
 Cubero, Ind. Res.
15. * In Cebollito Valley and Montezuma Mesa, Pub. L. :
 A large number of important pueblo sites unnamed. (Plate IV.)
16. In the Magdalena region, Pub. L. :
 A number of important pueblo sites unnamed.

II.—THE SAN JUAN DRAINAGE.

1. * In Chaco Canyon :
 Pueblo Pintado, Pub. L.
 Wejiji (Kindoklis), Pub. L.
 Hungopavi,^c Pri. L. (Plate v, fig. 1.)
 Una Vida,^c Pri. L.
 Chetrokettle,^d Pri. L.
 Pueblo Bonito,^d Pri. L.
 Casa Rinconada,^d Pri. L.
 Pueblo del Arroyo ^d (Tabakin), Pri. L.
 Kinkletsoi, Pub. L. (Plate vi, fig. 2.)
 Casa Chiquita, Pub. L.
 Pueblo Alto, Pub. L.
 Penasco Blanco (Talakin), Pri. L.
 Sinkletzin,^c Pri. L.

This is unquestionably the finest and best preserved group of pueblo ruins on American soil. It is a matter of great regret that the General Land Office was not invoked in time to preserve intact

^a I apply this name to the district north of Cochiti, which embraces the ruins of the former habitations of the Cochiti Indians. It was included in the original withdrawal for the proposed Pajarito National Park, but is omitted from the bill (H. R. 7269, 58th Cong.) creating the same. It includes the lovely Rito de los Frijoles of Bandelier and Lummis. It is fortunately included within the limits of the proposed Rio Jemez Forest Reserve.

^b These ruins are upon the lands withdrawn for the proposed Rio Jemez Forest Reserve.

^c These pueblos are on railroad lands to which title has passed irrevocably.

^d These are on the homestead of Mr. Richard Wetherill. This homestead has been suspended by the General Land Office and entry may be canceled.

this remarkable group of prehistoric buildings with all their auxiliary remains when it could have been done by the withdrawal of the entire tract. This is no longer possible, since every alternate section is now patented railroad land. The central group of ruins, i. e., Pueblo Bonito and its environs, have passed to private ownership unless annulled by the General Land Office. This tract of country is absolutely worthless for any economic purpose. The fate of the great body of ruins situated here is a striking illustration of the need for comprehensive legislation on this subject. This loss to science and history is solely the result of there being no one whose business it is to look after such matters. Through the generosity of the Messrs. Hyde, of New York City, a splendid collection obtained by the partial excavation of Pueblo Bonito is preserved in the American Museum of Natural History in New York City.

2. On tributaries of Chaco Canyon, Pub. L. :

- * Kinkfzhin. (Plate v, fig. 2.)
- * Kinyaah.
- * Kinbiniola.
- Kinahzin.

These buildings are of the same class and state of preservation as those of Chaco Canyon and probably belong with them ethnically.

3. In Canyon de Chelly and its tributaries, Ind. Res. .

- Cliff dwellings and pueblos of Canyon de Chelly. (Plate VII.)
- Cliff dwellings and pueblos of Canyon del Muerto. (Plate VIII.)
- Cliff dwellings and pueblos of Monument Canyon.

This is a remarkable group, consisting of a large number of pueblos and pueblo-like cliff dwellings in an excellent state of preservation, and being on an Indian reservation, under a custodian, their protection is assured. A large collection from this region is in the museum of the Brooklyn Institute of Arts and Sciences.

4. * In the Mesa Verde region,^a Ind. Res. and With. L. :

- Cliff Palace. (Plate IX.)
- Balcony House.
- Cliff dwellings of Mancos Canyon.
- Cliff dwellings of Navaho Canyon.
- Spruce Tree House.
- Long House.
- Cliff dwellings of Ruin Canyon.
- A large number of ruined towers.

This is the most remarkable group of pueblo-like cliff dwellings in existence. They are in a good state of preservation. The protection of these ruins is assured. They present the best picture we have of

^a I include in this title not only the cliff dwellings that are situated on the tract withdrawn for the proposed Mesa Verde National Park, but also those on the southern Ute Indian Reservation south to and including Mancos Canyon, all of which should be included within the park limits.

that phase of Pueblo culture which took advantage to the greatest possible extent of the protection afforded by a cliff environment, regardless of the hardships incident to such an existence. Many of these dwellings are almost inaccessible. This will be one of the most instructive and attractive of all our national parks. Unfortunately, the collections that have been made from these ruins are badly scattered and not well authenticated.

5. In Las Animas Valley :
 - * The Aztec ruin,^a Pri. L.
6. In Aztec Springs Valley :
 - Aztec Springs ruin.
7. In La Plata Valley :
 - La Plata ruin.
8. In the main valley of the San Juan :
 - Solomon's Ruin, Pri. L.
9. In the vicinity of Bluff, Utah :
 - Ruins of McElmo Canyon.
 - Ruins of Hovenweep Canyon.
 - Ruins of Montezuma Canyon.
 - Ruins of Yellowjacket Canyon.
 - Ruins of Cottonwood Canyon.

These are very numerous pueblo and cliff-dwelling ruins, mostly unnamed sites in an indifferent state of preservation, but archeologically very important. Some interesting collections from these ruins are in the American Museum of Natural History in New York.

III.—THE LITTLE COLORADO DRAINAGE.

1. On the Tusayan plateau, Ind. Res. :
 - (a) In Oraibi wash—
 - Kwaituki.
 - Seven-Mile Ruin.
 - (b) Middle Mesa group—
 - Old Mashongnavi.
 - Old Shumopavi.
 - Payupki.
 - Chukubi.
 - (c) East Mesa group—
 - Sikyatki.
 - Kukuchomo.
 - Kisakobi.
 - Tukinobi.
 - (d) In Jettyto Valley—
 - Awatobi.
 - Kokopnyana.
 - Kawaika.
 - Chakpahu.
 - (e) In Cottonwood wash—
 - Bidahuci group.
 - (f) Miscellaneous—
 - Tebugkihu (Fire House), northeast of Keams Canyon.

^a Properly cared for by the owner, Mr. Kountz.

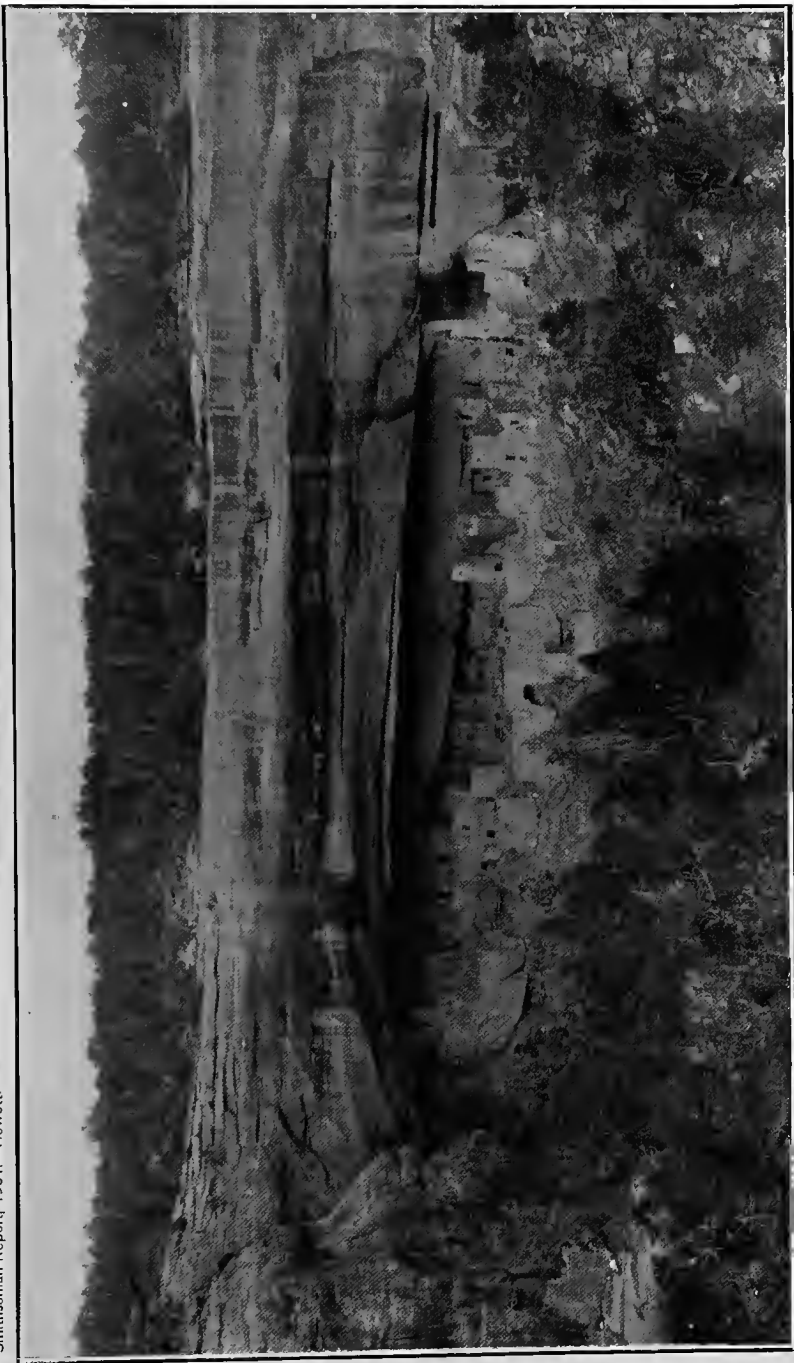
2. In the main valley of the Little Colorado :
 - Homolobi.
 - Chevron.
3. In the Puerco Valley :
 - Adamana.
 - Navaho Springs.
 - Kintiel (30 miles north of river), Pri. L.
4. In the petrified forest, With. L. :
 - Stone Ax.
 - Canyon Butte Ruin.
 - Milky Wash Ruin.
5. In Chavez Pass :
 - Tchubkwitcala.
6. In the Silver Creek Valley :
 - Four-mile ruin.
 - Pinedale.
 - Showlow.
 - Linden.

The above groups of ruins of the Little Colorado Drainage (1 to 6) are all pueblo sites that have proven to be of great archeological interest. Some of them are known to have been inhabited during the historic period. They have suffered much from indiscriminate, unscientific excavation and collections therefrom are badly scattered and not well authenticated. On the other hand, a great amount of scientific work of the highest order has been done in these ruins and excellent collections from them are in the United States National Museum, the Field Columbian Museum, Chicago, and Peabody Museum, Cambridge.

7. On the Zuñi Region, Ind. Res. :
 - * Hawikuh.^a
 - * Kiakime.^a
 - * Halona.^a
 - * Matsaki.^a
 - Pinana.
 - Ketchipauan.
 - * Chyanaue.^a
 - * Archeotekopa, Pub. L.
 - El Morro or Inscription Rock, With. L.

These are historically the most important ruins in the United States, embracing the remains of the famous "seven cities of Cibola" and many other pueblo sites of equal magnitude. Many are in a fair state of preservation, some reduced to mounds; but it will be generally agreed, I believe, that all remains of this historic group, whatever may be their condition, merit preservation. Being under custodianship, they should suffer but little from vandalism. Large collections from these ruins are in the Peabody Museum, Cambridge, the results of excavations by the Hemenway expedition.

^a Identified by Bandelier and Cushing as belonging to the "seven cities of Cibola."



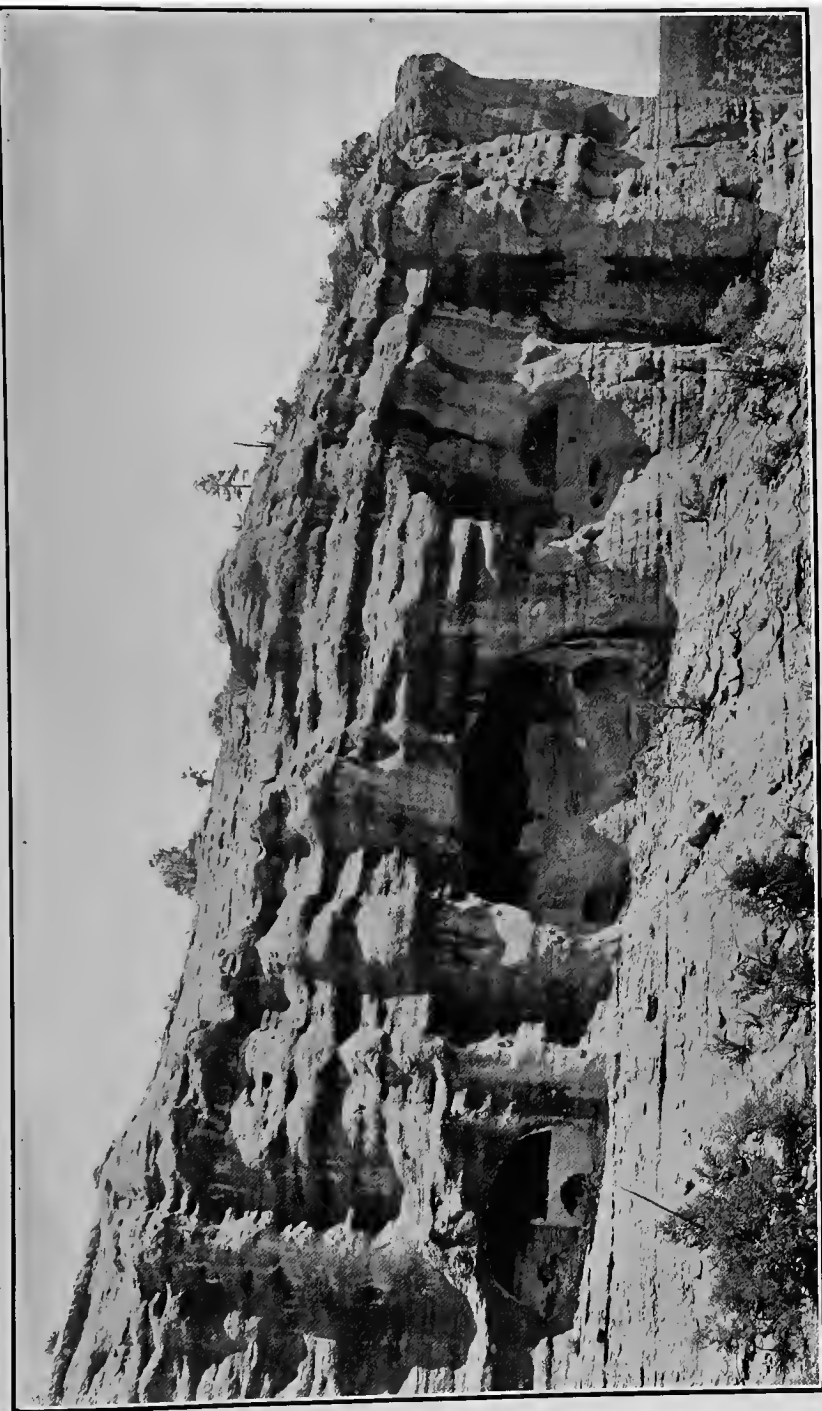
CLIFF PALACE, MESA VERDE PARK, COLORADO.



FIG. 1.—MONTEZUMA CASTLE, BEAVER CREEK, ARIZONA.



FIG. 2.—CASA GRANDE, GILA VALLEY, ARIZONA.



CLIFF DWELLINGS, GILA HOT SPRINGS, NEW MEXICO.

8. * In Walnut Canyon, For. Res.
A fine group of cliff dwellings.
9. On Cave Dwellers Mountain, For. Res. :
An extensive and interesting group of cave dwellings.
10. The Black Falls Region, For. Res.
Several important groups of pueblo ruins in a good state of preservation ;
not named.

IV.—THE GILA DRAINAGE.

1. In the Verde Valley :
 - (a) In the main valley, With. L.—
Great number of excavated cliff dwellings.
 - (b) * The Red Rocks district—
Honanki.
Palatki.
Many other unnamed pueblo and cliff-dwelling sites.
 - (c) * Beaver Creek—
Montezuma Castle, With. L. (Plate x, fig. 1.)
Montezuma Well, For. Res.
2. In the Salt River Valley :
 - (a) In the Tonto Basin, With. L.—
Numerous pueblos and cliff-dwelling sites.
 - (b) On White Mountain Creek, Ind. Res.—
Numerous pueblo and cliff-dwelling sites.
3. In the main valley of the Gila :
 - * Casa Grande, Nat. Res. (Plate x, fig. 2.)
Pueblo Viejo.
Numerous unnamed sites.

These pueblos have been rapidly destroyed by the advance of agriculture, most of them without scientific investigation. Important explorations were made by the Hemenway expedition among the lower Gila ruins, the collections from which are in the Peabody Museum, Cambridge.

4. * On the upper tributaries of the Gila, For. Res. :
 - (a) On the Blue—
Numerous cliff-dwelling and pueblo sites.
 - (b) On the San Francisco—
Numerous cliff-dwelling and pueblo sites.
 - (c) On the Tularosa—
Numerous cliff-dwelling and pueblo sites.
 - (d) On the west fork of the Gila—
Gila Hot Springs cliff dwellings. (Plate xi.)

The ruins of the upper Gila and its tributaries are among the most important and least known in all the pueblo region. Many are in an excellent state of preservation. But little in the way of scientific study has been done among them and no extensive collections have yet been made. Fortunately, efficient custodianship has been extended over them in time to secure them while still in a good state of preservation.

- (e) On the San Pedro—
Numerous pueblo ruins.

V.—MISCELLANEOUS.

1. In the Mimbres Valley.

This is, strictly speaking, an inland drainage, tributary to neither the Rio Grande nor the Gila, between which it lies, and extending down into the State of Chihuahua, Mexico. In this valley is a large number of interesting pueblo sites.

2. In Lost Canyon, Colorado.

In this and other tributaries of the Dolores drainage are numerous cliff dwellings and towers, remarkable as being the one point where pueblo culture of any importance extends north of the San Juan-Grand watershed.

3. In the Virgin Valley, Utah.

A locality of numerous pueblo ruins, remarkable as being the only ones of much note west of the Colorado River.

4. On the military reservations of Fort Bayard, Fort Wingate, Fort Lowell, Fort Apache, Camp Verde, and Fort Defiance are ruins of considerable importance, including cliff dwellings, pueblos, towers, and cemeteries not specifically pointed out in the drainage areas in which they occur.

VI. CONCLUSION.

It is manifestly time for decisive action on the question of American antiquities. Congress should at once enact comprehensive legislation on this subject. It is the duty of those interested in American archeology to prepare the necessary information and present it to the proper authorities in such manner that the scope of legislation needed will be self-evident. I offer the following suggestions, which I believe, in the light of our present information, to be in accord with the views of a large majority of the archeologists dealing with American subjects and acquainted with the American field:

1. That the preservation of antiquities on all lands owned or controlled by the Government of the United States should be provided for by law.

2. That custodianship of antiquities should be left where it is, viz, in the departments having jurisdiction over the lands on which antiquities are situated, and that the protection of said antiquities by said departments should be made obligatory.

3. Expert authority should exist for the periodical inspection of ruins, report on the same, and recommendation of preservative measures to the departments having custodianship.

4. The privilege of excavation should be restricted to institutions, domestic or foreign, that can conduct the same in a scientific manner and make report of results, and that will place all collections secured in permanent public museums.

5. There should be expert inspection of excavations, to see that the

same are conducted according to the regulations prescribed, and to see that collections are disposed of as provided for by law and not for commercial purposes.

6. Adequate penalties for violation of the law should be prescribed

In the meantime it is unnecessary to await the movement of the great machinery of Congress when so much power already exists in Executive Departments and so much loss goes on that future Congressional action can never repair. Results can be steadily accomplished. Departments invite authentic information and recommendations. When furnished with evidence they act promptly and effectively. All who are interested in the preservation of American antiquities—and this is a rapidly growing number—should encourage and uphold these efforts in every possible way.

