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ANTHROPOLOGY.—*Archeological accomplishments during the past decade in the United States.*<sup>1</sup> FRANK M. SETZLER, U. S. National Museum.

During the past 12 years archeological exploration in the United States has been accelerated to such a degree that many felt the profession scarcely prepared to profit by all the advantages placed at its disposal. Never before, and perhaps never again, will so many archeological sites be excavated simultaneously within the continental United States. The archeologists who participated can congratulate themselves in having accomplished so much under such unusual stimulation.

Prior to 1930 average field expeditions consisted for the most part of 10-15 laborers and assistants, working continuously from 3 to 4 months, with an average cost of about \$2,500. From 1935 to 1940 exploration personnel increased to an average of 150 men and functioned from 36 to 48 months continuously. Well-staffed laboratories were established in the field. The material culture obtained was cleaned, prepared, classified, restored, and processed from day to day. The technique in some instances was streamlined to such an extent that almost from the time the first shovel was pushed into a site archeological specimens and data began to roll out in published form. An archeologist could no longer ponder or gloat over the results of a back-breaking day of digging. He had to serve as engineer and personnel manager handling large crews of men; as an efficiency expert, and above all, a skilled public accountant, timekeeper, and high class execu-

tive. At night reports of the day's work were written. Everything as far as possible had to be standardized. Above all, many thousands of men and women were given legitimate employment. Total man-hours on large-scale projects reached astronomical proportions. The final results may never be entirely comprehended; mistakes were made, but the contributions to American archeology have been enormous. One can safely assume that if a goal had been set in 1930 under the prevailing conditions of the time, for archeological explorations within the subsequent 50 years, this goal has already been reached and in some areas surpassed during the past 6 or 7 years.

Many factors have played an important part in bringing about the results during the past decade. One of the most important was the Federal financing of archeological projects to provide legitimate employment for thousands of laborers in the field and laboratories. Prior to 1930 Federal assistance to States was limited to a "Fund for Cooperative Ethnological and Archeological Investigations," supervised by the Bureau of American Ethnology under the Smithsonian Institution, to which competent scientific organizations with limited funds could apply.

Early in 1933 various States obtained funds from the Federal Government, through the Emergency Relief Administration, to assist in giving employment to their needy. Under such a grant the town of Marksville, La., provided me with a number of laborers for the excavation and restoration of the Marksville site. Because I was unaccustomed to providing gainful

<sup>1</sup> Address of the retiring president of the Anthropological Society of Washington, delivered at the 707th meeting of the Society, April 21, 1942. Published by permission of the Secretary of the Smithsonian Institution. Received April 23, 1942.

employment to more than 10 men working on a mound, it required considerable experimentation and readjustment to keep a crew of over 100 men busy and yet provide careful supervision while excavations progressed on three mounds, a village site, and a man-made earth embankment partially encircling the site. This experience, however, proved valuable when in December 1933 the Civil Works Administration was established in Washington. Its primary purpose was to reduce unemployment. Previous experience at Marksville had convinced the Smithsonian officials that under proper supervision and with a sufficient number of trained men, worth-while scientific results on a large scale could be obtained. Within a few weeks 11 archeological projects employing about 1,500 persons were organized. The sites selected were limited by climatic and economic factors. Seven projects were established in Florida, and one each in Georgia, North Carolina, Tennessee, and California. The selection took into consideration a long range program of archeological research, especially in areas where it would not interfere with existing programs of state or other outside organizations. Those who played an active part in this emergency may recall the many headaches and uncertainties resulting from the experiment. Nevertheless it proved that under competent and trained supervisors, scientific archeological explorations could serve as a legitimate channel for relief employment. The publications resulting from these relief explorations, which lasted from about the middle of December 1933 to April 1934, indicate that scientific standards were maintained. Many of the unforeseen difficulties which resulted from this rapidly organized program were later corrected.

About the same period a new type of emergency presented itself along the Tennessee River and its tributaries, namely, the eventual flooding of vast areas as a result of the construction of several Tennessee Valley Authority dams. Realizing that numerous archeological sites were located in the areas to be flooded, and that the impounded waters would either destroy or

prevent any excavation of these sites, the board of directors of the T.V.A. appointed Maj. W. S. Webb to supervise the necessary surveys and excavations in southern Tennessee and northern Alabama. Here again the required labor was furnished by C.W.A., F.E.R.A., and W.P.A. relief agencies.

In some respects the success achieved by the archeological projects under the direction of the Smithsonian Institution caused numerous archeologists to apply for similar projects within their States. Because of the limited archeological staff in the Smithsonian Institution it was impossible actively to direct the many projects submitted to the new organization, known as the Works Progress Administration. The Smithsonian Institution was requested, however, to assist the Federal W.P.A. office in an advisory capacity in determining the qualifications of the men assigned by the state to direct the archeological programs outlined in the various applications. Within the following year one-half of the States in the Union made application for archeological projects. As time went on these programs became better organized until in July 1938 only state-wide projects under direction of the most competent organization, museum, or university within the State were considered eligible. From then on the responsibility of a program of excavation, laboratory analysis, and the writing and publishing of the final report rested entirely in the hands of the state archeologist and the sponsoring agency.

Quarterly progress reports resulted from all these projects and these reports were recently deposited in the National Museum.<sup>2</sup> These are now indexed and a brief summary made of the work reported. In many cases the sponsoring agency has published a detailed report of excavations and summarized the results obtained; in other

<sup>2</sup> The following restrictions have been placed on the use of these quarterly reports: "Although these reports are available to qualified and interested persons, care must be taken that no publication should result from the use of these materials except (A) after the scientific sponsor has been notified and has granted permission; (B) after the scientific sponsor is unable to publish a detailed report; (C) after the scientific sponsor has published a full account of the results obtained."

eases the final reports are awaiting publication. Several progress reports have been published from time to time.

At the end of this fiscal year, June 30, 1942, almost all archeological exploration sponsored by the Works Progress administration and those assisted by C.C.C. allotments will terminate. Some of the laboratories processing archeological specimens may continue to operate on a reduced staff basis until all specimens have been analyzed. It is, therefore, within the period covered by this paper that the origin and completion of one of the most far-flung archeological enterprises ever undertaken by a single nation were accomplished.

To compare the results dollar for dollar would be impossible. The money allotted by the Government was matched by the sponsor in varying degrees ranging from 5 per cent to as high as 50 per cent of the total spent, but the main purpose was to provide legitimate employment to the thousands of relief workers. In most cases over 85 per cent of the total allotments were used for wages or salaries, because the overhead expenses of archeological supplies, such as shovels, trowels, and laboratory material cost relatively little. Since the results obtained were entirely scientific and educational, no overproduction resulted. The most immediate danger, if these projects were to have continued for another 10 years, would have been exhausting all archeological sites. After such large-scale operations, working under the pressure of time, it may be fortunate that this phase of field work will now be terminated. After the results have been digested and summary reports published, it will give the archeologist an opportunity to survey critically the new contributions that have been made and plan future research work, even with a reduced crew, toward the solution of certain important problems on the basis of the many new theories resulting from the work of the past ten years. Then, too, if our techniques, laboratory analyses, and classifications are to change and improve as much again within the next 10 years, many of the more important sites should be preserved in order to check theories, stratification, and conclusions.

It is of interest to review some of the contributions of the past 12 years. In my opinion the most important archeological contributions that have been made during this period are:

1. The general acceptance that man lived in North America contemporaneously with now extinct animals, such as *Bison taylori*, *Camelops*, mammoth, etc.; even though no exact dates can be determined, we are confident that these associations occurred some time between 10 and 20 thousand years ago.

2. Outlining the more important cultural manifestations in the Mississippi River Valley, especially in the Southeast.

3. Recognition of new archeological manifestations in the southern portions of New Mexico and Arizona.

4. The application of archeological techniques to the restoration and reconstruction of several early European settlements, such as Jamestown, Williamsburg, St. Augustine, and Plymouth.

These contributions should in no way detract from essential detailed studies that were made in other parts of the country. The four cited above, after all, form primarily a framework in which details will have to be grouped before the entire picture can be assembled and a masterpiece produced, provided, of course, that the artist or artists can be found to bring together all the elements required for such a painting. Explorations in other portions of the country have obtained important results and have contributed much to the details of previously outlined cultural patterns.

So far as Early Man in America is concerned, the relief agencies have played only a minor part. Most of the work during the past 10 years, which was concentrated on the excavation of Folsom or Yuma sites, was financed by more or less privately endowed institutions. The Lindenmeier site in Colorado, the Sandia Cave and Clovis-Portales sites in New Mexico, Gypsum Cave in Nevada, Signal Butte in western Nebraska, sites in north-central Texas, the Cochise complex in southern Arizona and New Mexico, sites in California and Oregon, and others in Utah and Minnesota have all contributed evidence toward the Paleo-



Indian problem in North America. The published accounts dealing with this subject have accumulated very rapidly during the past 12 years. In one of the recent summaries covering this field 112 publications were cited, all of which were printed since 1930.

As a result of these intensive studies one can now conclude from the archeological evidence that an essentially modern type of American Indian<sup>3</sup> migrated from Asia into North America about 15,000 years ago. The diagnostic features of his material culture as well as their association with certain extinct animals is well known. Aside from the importance of definitely establishing the antiquity of man in this hemisphere, these investigations have attracted the interest of geologists and paleontologists in that short but constantly expanding geological period, the Pleistocene, during which man became an integral part of the American fauna. Geologists as well as archeologists have developed a spirit of cooperation in these studies that never existed prior to 1930.

The second and, from my own point of view, the most important area in which archeological work has made the most rapid strides during the past 12 years is in the Southeast, especially in eastern Texas, Oklahoma, Louisiana, Alabama, Georgia, Florida, Tennessee, Kentucky, and Arkansas. Over 60 per cent (more than 1.5 million dollars a year) of the total allotments for W.P.A. archeological projects was assigned here. In other words, the amount of archeological explorations in this section of the Southeast is due almost entirely to the Federal allotments granted, through such agencies as C.W.A., F.E.R.A., W.P.A., and C.C.C., which provided the labor for extensive excavations.

Except for the archeological program of the Bureau of American Ethnology in Florida and the earlier surveys by C. B. Moore, no extensive explorations had been carried on in the Southeast before 1933. In the winter of 1933-34 the Smithsonian

<sup>3</sup> No human skeletal material has yet been found in direct association with the well-established archeological and paleontological strata.

Institution sponsored 10 C.W.A. excavations in the Southeast. These experiments, together with those inaugurated by the T.V.A., led the way to subsequent large-scale programs in the various States. Some of the C.W.A. work in Florida was continued. In Georgia the city of Macon sponsored the large archeological program at Ocmulgee, which later became a National Historical Monument, and excavations were continued under the National Park Service; additional projects were completed on St. Simons Island near Brunswick; Irene Mound near Savannah; sites near Columbus; and a State survey. In northern Alabama work was concentrated in the Tennessee River Valley. All are familiar with the T.V.A. reports published in the Bureau of American Ethnology bulletins. The work in Mississippi was limited primarily to the Natchez Trace Survey. In Louisiana several projects concentrated on the Marks-ville and Tchefuncte problems.

As indicated before, the limited number of excavations in the Southeast prior to 1930 gave only a jumbled picture of certain exceptional sites which had produced unusual specimens. Nothing more than a guess gave any indication of the relative chronology. Many felt that the prehistoric ancestors of the Muskogean, Natchez, Tunica, and other ethnological groups lived in the Southeast about the beginning of the Christian Era. Archeologists had a hunch that they were considerably influenced by some mysterious groups farther south in Mexico. Recent archeological excavations brought about a lengthening and foreshortening of the chronology in the Southeast. By this I mean that the finding of Folsom projectile points indicates that early man hunted over parts of the country. Even though no concentrated accumulation of such artifacts has been discovered in association with the extinct faunal complex farther west, a sufficient number of these diagnostic projectiles has been sent to the National Museum, as well as a large number discovered in our archeological collections from the Southeast, to indicate that Folsom man roamed the rivers and valleys for his sustenance. From such evidence it is certainly justifiable

to extend man's existence in the Southeast back at least to 10,000 years before the Christian Era. On the other hand, the chronology of the more sedentary groups, those lineal ancestors of the historically known Indian tribes, unquestionably has not only been condensed, but the cultural stratification much more sharply defined. Without repeating the various and innumerable foci thus far established, one can safely assume in a very general way that the archeological complexes appearing in the Southeast after the beginning of the Christian Era can be divided into three main divisions: early, middle, and historic.

By "early" is meant the widespread pre-agricultural complex characteristically associated with shell heaps. Throughout the Southeast these deposits are found along the coasts and along the banks of the larger inland rivers. The complex is characterized by mortars and pestles, tubular pipes, a large variety of shell beads and pendants, bone awls and tubes, and stemmed projectile points. The lower strata give no evidence of pottery, which would indicate pre-agriculture. This suggests a simple sedentary existence depending on hunting, fishing, and root- and berry-gathering. The most important sites containing this complex are Stallings Island in Georgia, Tchefunete in Louisiana, Pickwick Basin in Alabama, and Indian Knoll in Kentucky. Pottery does occur in the later phases in all of these sites and consists uniformly of a crude fiber-tempered variety, probably the earliest type in the Southeast. There are minor variations from site to site, such as disc beads plastered on bone tubes with asphalt, from Indian Knoll in Kentucky; and different decorative treatments on the pottery. Nevertheless, not only are there sufficient differences between the various sites to show an adjustment to the local environment, but a general uniformity exists between the archeological complexes in the Southeast and the objects from similar sites in New England and the Pacific coast. This indicates a probable hemispheric similarity of a widespread cultural level.

So far as chronology of these people is concerned it can be safely assumed that

they represent the first pottery-using people in the Southeast. As to whether they represent descendants from the much earlier Folsom hunters we have no evidence. My guess is that these semi-sedentary people represent a much more recent Asiatic migration of modern American Indians inhabiting the coasts and river valleys some time after A.D. 500. From this period up to A.D. 1800 archeologists in the Southeast have developed a most convincing series of cultural manifestations. These evolve from this early period through the various stages which led to the variety of historical Indian cultures found in the Southeast at the time of European discovery. Numerous outside influences account for these varieties. The introduction of maize, allowing more leisure and a more or less guaranteed staple food economy, permitted the development of complex political and religious organizations as well as the byproducts of large ceremonial centers, such as Ocmulgee, Etowah, Kolemokee, Moundville, Troyville, and Spiro. Large tribal migrations took place into the area as well as out of the Southeast. Even though some slight influence is obvious from farther south in Mexico, the only real proof of these contacts rests in artistic similarities, and these occur almost at the close of the protohistoric period, probably within the sixteenth or seventeenth century.

Cultural similarities have also been established between certain manifestations in the Ohio Valley and some of the Upper Mississippi Valley cultures. Numerous publications have described in detail the results from these W.P.A. archeological explorations; more will follow. One can safely assume, I think, that the broad outlines of the prehistoric cultures in the Southeast have been more or less established as to their relative chronology and cultural relations. Many more problems remain, especially the historical antecedence; in other words, the strict application of the historical method to Southeastern prehistory.

These accomplishments, when considered from the point of view of what was known prior to 1930, speak for themselves. Credit, it seems to me, must go first to the men re-

sponsible for outlining and directing the programs of research. Nevertheless they would still be working on their plans if the Federal and State relief agencies had not supplied the labor and material. Neither could have accomplished the results without the other. The same is true of the projects elsewhere.

The third most important archeological contribution during the past decade resulted from concentrated excavations in southwestern New Mexico and southern and northern Arizona. From scattered excavations in southern Arizona prior to 1930 a concerted effort has been made, both by well-organized programs and continuous excavations, to obtain data necessary to solve the problems of prehistory in this section of the Southwest as had been done in northern New Mexico and northeastern Arizona. The results of these investigations, entered into by various privately endowed organizations, have been published and provide a resume of the important cultural manifestations. These results together with the highly developed dendrochronology make it possible to observe cultural movements and variations, and enable the specialist to establish specific dates for the sites.

As a result of these concentrated programs the occurrence of two basic cultures in the Southwest can be postulated: The Anasazi and Hohokam. The ramifications of the Anasazi through the various Basketmaker and Pueblo stages is well known. The men working in the southern Arizona field propose that the earliest and most widespread complex, known as the Cochise, consisted of a simple hunting complex, the remains of which are found with certain extinct fauna which they have dated around 8000 B.C. From this hunting and gathering complex developed a more sedentary group out of which, about the beginning of the Christian era, two variations developed, the Mogollon and the Hohokam.

These people lived in large communities and made fine undecorated pottery and artistically carved stone objects—all in all a rather closely knit, well-developed, sedentary culture. During this same period the

people known as the Basketmakers lived in caves and shelters in northern New Mexico, wove beautiful sandals, and made artistically decorated coiled baskets. These two centers of cultural influence continued to expand; then contact and an interchange of ideas took place between the north and south. About A.D. 1000 the Hohokam reached the peak of its cultural influence, and the now well-established Pueblo cultures in the north began to expand to the south. About A.D. 1200 this northern Pueblo culture began a definite southward movement, forcing its influence through the Salado group upon the Hohokam and began the latter's eventual decline. The Pueblos, owing to catastrophic droughts were forced out of the San Juan drainage, and owing to somewhat similar ecological factors spread southward. The droughts also caused a decrease in their area of domination and resulted in several regional and somewhat culturally separable groups. About A.D. 1600 the picture is well known from historical accounts, with the Hopi in Arizona, the Zuñi in New Mexico, the Pima along the Gila and Salt Rivers, while the Papago were spreading farther south.

Definite cultural influences, coming from centers farther south in Mexico, have been found in these southern Arizona sites; while pottery and other culture material from the Great Plains area has been found among the Pueblo cultures in northern New Mexico. These represent only the highlights from an area which in 1930 was considered drained so far as new archeological manifestations were concerned.

The fourth outstanding accomplishment is the application of modern archeological techniques to recovering, verifying, and supplementing historical accounts of early European settlements in the United States. This approach differs only in point of time and cultures involved. Ever since the archeologist emphasized the historical approach instead of trying to accumulate quantities of beautiful pottery or arrowheads and pipes, he became a collaborator with the student of history and the ethnographer. Since 1930 this technique has proved its value in supplementing and verifying the



limited written accounts dealing with some of the first European settlements in America.

The best-known example and one of longest duration is the work at Jamestown Island, Va. Similar approaches were made at St. Augustine, Fla., and quite recently in and around Plymouth, Mass. At Jamestown historical and archeological research are working together to unravel the story of the years between 1607 and 1699, at which time Jamestown was the outstanding community in the colony of Virginia. The historical records of this first century of English colonization of America are meagre. The settlers were naturally too busy trying to keep body and soul together to do much recording for the edification of their descendants. Many of the records that were made have been destroyed or lost. Moreover, even as today, people seldom preserved records of their houses, furniture, dishes, and the like. Many of these, especially the nonperishable type, such as rum bottles, spoons, buckles, seals, and china, are being recovered through controlled archeological excavations. On the other hand, the existing documents, such as maps, deeds, and court records, assist in determining facts that no amount of excavation could produce. The important contribution is that both disciplines, history and archeology, are working together toward the solution of specific problems. This type of collaboration at the most recent end of our time scale is just as important as collaboration between the Pleistocene geologist or paleontologist and the archeologist at the extreme opposite end of our human history scale. This combination of efforts or techniques appears to me to cover the

whole field of anthropology; functional or applied anthropology bridges a similar gap between ethnology and sociology. Similar examples could be cited for geography, economics, psychology, biology. The new science seems to be "growing up" and expanding in every direction.

Getting back to archeology, I feel confident that historical-archeology<sup>4</sup> will continue to play an important part in the restoration of sites historically associated with our own European cultures and from the point of view of popular interest will play a very prominent part in supplementing the cultural background of our own ancestors.

Many other contributions have been made in those sections of the country which have not been stressed. There is the taxonomic classification, the reanalysis of earlier archeological excavations, the archeological survey of Kansas, explorations in Maine, New York and Pennsylvania, the work at the Kincaid site in southern Illinois, and the excavation of the Angel Mound group in southwestern Indiana. To these may be added dendrochronology in the Mississippi Valley from which some definite dates have been determined.

One is always limited in preparing a summary of this kind. I have endeavored to select those phases of the work that in the light of present conditions have contributed most to our knowledge of prehistoric man in the United States. At the same time I have tried to point out the unusual social conditions that made possible the large-scale archeological operations.

<sup>4</sup> A poor name. Perhaps Colonial-archeology would be a better term, although such a collaboration of two disciplines would not necessarily be limited to the Colonial period.