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Department of Anthropology

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THE ALBUQUERQUE AND CHACO ANTHROPOLOGICAL CONFERENCES OF THE CORONADO CONGRESS, AUGUST, 1940

As part of the activities commemorating the four hundredth anniversary of the exploration of New Mexico by Coronado, the University of New Mexico sponsored a group of scientific conferences that constituted the Coronado Congress. Among these was the Anthropology Conference, chairmanned by Dr. Donald D. Brand, which met in Albuquerque August 12th, and in the Chaco Canyon August 13th to 15th. In accordance with the spirit of the Cuarto Centennial Celebration, and consonant with the location and research interests of the University of New Mexico, special invitations were extended to American and Mexican anthropologists active in the Southwestern and Mexican fields. More than 150 delegates attended the Anthropology conferences, including a group of eighteen Mexicans.

MEXICAN ANTHROPOLOGISTS

Composing the Mexican delegation were: Professor Diodoro Antúnez, Instituto Politécnico Nacional, and Señora Antúnez; Ing. Salvador Barcena; Dr. Daniel R. de la Borbolla, Instituto Politécnico Nacional; Mr. Jean B. Johnson, Departamento de Asuntos Indígenas, and Mrs. Jean B. Johnson; Dr. Isabel Kelly, Research Associate, University of California; Dr. Paul Kirchhoff, Instituto Politécnico Nacional; Dr. Norman A. McQuown, Instituto Politécnico Nacional, and Departamento de Asuntos Indígenas; Dr. M. Maldonado K., Instituto Politécnico Nacional; Ing. Ignacio Marquina, Instituto Nacional de Antropología, and Mrs. Susana Barcena de Marquina, and daughter; Professor Miguel O. de Mendizabal, Instituto Politécnico Nacional; Eduardo Noguera, Instituto Nacional de Antropología, and Mrs. Margarita A. Noguera and daughter; Dr. Jorge A. Vivó, Instituto Politécnico Nacional, and Instituto Panamericano de Geografía e Historia.

Eight of the Mexicans came by rail to Ciudad Juárez-El Paso, whence they were escorted in two National Park Service cars by Jesse Nusbaum and Erik Reed, archaeologists for Region 3 of the National Park Service. The others came in three private cars. The Mexican delegation was housed in a University of New Mexico dormitory, during its stay in Albuquerque. On Monday morning the Mexican anthropologists made a trip via Santo Domingo Pueblo to Santa Fe, where they inspected the National Park Service, Region 3 headquarters, and the Laboratory of Anthropology, and then were complimented with a luncheon at La Fonda.

ALBUQUERQUE CONFERENCE

The first formal meeting of the Anthropology Conference was Monday afternoon on the University of New Mexico campus. Ing.

Ignacio Marquina, chief of the Mexican Department of Prehispanic Monuments, summarized recent work in Mexico; and Dr. Frank H. H. Roberts, Jr., Smithsonian Institution archaeologist, presented a general summary of archaeologic work in the American Southwest. That evening there was a banquet honoring the Mexican delegation, in the Coronado room of the Alvarado hotel, at which Dr. J. F. Zimmerman, president of the Coronado Congress, delivered a speech of welcome which was responded to by Dr. Daniel Rubín de la Borbolla, head of the Department of Anthropology at the Instituto Politécnico Nacional in Mexico City. After the banquet, the anthropologists joined the artists of the Coronado Congress in an Art and Archaeology session in the Alvarado auditorium. Rene d'Harnoncourt, general manager, Indian Arts and Crafts Board, spoke on "Primitive Arts and Crafts in Mexico and the Southwest," and Mr. F. H. Douglas, director of the Denver Art Museum, talked on "European Influence on Indian Design Styles."

CHACO CONFERENCE

Afternoon Session, August 13th

Subject: Physical Anthropology

Tuesday morning the majority of the anthropologists participating in the Albuquerque Conference drove out to the Research Station of the University of New Mexico, in Chaco Canyon, where the regular summer field sessions in Anthropology were under way. Here the fourth Chaco Conference, which is held each year for the purpose of bringing to light any recent or unusual developments in the field of Anthropology or in closely related fields, was inaugurated with a discussion by Dr. Daniel de la Borbolla concerning present studies of the physical anthropology of Mexico.

According to Dr. Borbolla, up to the present there has been a great dearth of work done in this connection, although there is no lack of material. He outlined the physical types which might be found in Mexico and their associations with types outside that area. Dr. Borbolla said that the Instituto Politécnico Nacional of Mexico is now training a group of students who will in three years be able adequately to carry out the proposed program of research on this subject. Accordingly, there will be nothing done in this particular field for at least three years.

Morning Session, August 14th

Subject: Ethnology

Dr. Fred Eggan, Department of Anthropology, University of Chicago, acting as chairman, led this section of the conference. He opened the discussion with some general remarks concerning the present movement in Southwestern Ethnology, which he described as being away from the Pueblos toward the non-Pueblo groups, with emphasis on their inter-relationships.

Dr. Paul Kirchhoff, of the Instituto Politécnico Nacional, Mexico,

was asked to report on new developments in the field of Mexican Ethnology. He outlined the main problems confronting Mexican workers as follows:

1. To realize the extent of a series of native cultures existing at the time of the conquest. About two dozen groups had been ignored because only those numerically important were considered. The positions of the minor groups with regard to the general Mexican situation should be defined.
2. To make a chronological chart of Mexico.
3. To study the influence of customs imported from Spain and Portugal on native cultures existing at the time of the conquest.

Dr. Kirchhoff said that work under way included the Tarascan project (similar to that being carried on in the Teotihuacán area), government-sponsored native population studies, and studies on the distributional aspect of American culture, under the direction of a committee of the International Congress of Americanists.

Mr. Jean B. Johnson, Departamento de Asuntos Indígenas, Mexico, stated that he was interested in starting a continuous study of the Sonoran area. He said that he wished to use Dr. Spicer's study as a lever, and would also use documentary material from the archives. Mr. Johnson stated that he would study in particular the Yaqui in connection with other tribes, and that he would include the Tarahumare if possible. He hoped to have the work well under way within a year.

The next speaker, Father Berard Haile of St. Michaels, Arizona, reported that the relations between the Navajo and outsiders (Pueblo, White) were about the same as in historical Spanish times. He said that any foreign contact had to be ceremonially cleared. As an example, Father Berard cited the fact that a war dance was held if a Navajo married a Pueblo Indian or a white person. Although there was a modern trend, due to the influence of schools, toward eliminating this custom, Father Berard's studies showed that Whites were never completely accepted.

Dr. Leland C. Wyman, of the Boston University School of Medicine, continued the discussion of Navajo Ethnology by stating the two main handicaps encountered by ethnologists working in this area: (1) the extremely difficult language, and (2) the fact that Navajo archaeology was still in its infancy. He said that the principle aims of workers in this field should have been to obtain concrete data with which to test generalizations and to determine the cultural variations between the various Navajo groups.

Dr. Clyde Kluckhohn, Harvard University, offered further information regarding work among the Navajo. He had compiled a Navajo bibliography, which was then in press, and he was completing Navajo culture data. Dr. Kluckhohn had studied a group of Navajo children from their birth and had hopes of continuing the study to their maturity. His purpose was to show how people actually behaved

within a culture and how their personalities were shaped. He was then collaborating with Dr. Fries, who had worked on the behavior of white children in New York City.

Dr. Margaret E. Fries, New York City, reported that she was interested in congenital factors and their relation to environment. In addition, she was recording the occurrence of frustrations and indulgences. Toys had been offered to the children to test their reactions; the Navajo children reacted faster and more realistically with animal toys than did the city children. Dr. Fries said that a comparison was difficult in this instance because the latter were not well acquainted with animals. In other cases the nervous reactions of the Navajo children were not as rapid as those of the city children.

The next speaker in the discussion of the Navajo question was Dr. Solon T. Kimball, Social and Economic Surveys, Navajo Reservation, Window Rock, Arizona, who said that the immediate problem of Soil Conservation Service revolved around three factors—population and its growth, economy (distribution and production), and the characteristics of the tribal and social organization. For four years, Dr. Kimball said, the Navajo problem had been one of economics; the land rehabilitation program depended upon a study of the economy and the erosion and depletion of range as manifestations of population pressure. He said that as the Soil Conservation Service utilized a knowledge of native social organization whenever possible in redistribution, a greater understanding was necessary for the formation of a method of adjustment that would be less harmful than that now in operation.

Miss Flora Bailey, instructor, Springfield College, Springfield, Massachusetts, informed the conference that in her work with the Navajo she was trying to test generalities with regard to their food, motor habits, and practices and beliefs concerning the reproductive cycles.

Dr. Edward H. Spicer, University of Arizona, reported that Haury and Opler were working with the Apaches.

Mr. Helge Ingstadt's most recent book on the Apache was discussed by Mr. Halseth, who said that he believed it to be a travelbook rather than an ethnological work, although it was accepted as the latter by Europeans. Mr. Halseth said that the book contained some factual material mixed in with the author's own ideas in such a way that only half-truths resulted.

Dr. Omer C. Stewart, Social Research Council fellow, was the first to discuss work among the Pueblo Indians. He reported that he was studying child psychology at Zuñi and also was observing the differences in the attitudes of the older and younger adults.

Dr. Eggan, in his capacity as chairman, reported as follows for a number of people who could not be present:

Dr. M. Titiev had worked out a history of the secession in old Oraibi.

Dr. Kinnard was studying linguistics and economy at Hopi.

Dr. and Mrs. Dennis were studying child psychology at Hopi and Cochiti.

Gordon Page was working on a survey of Hopi agricultural practices.

Dr. Florence M. Hawley, Department of Anthropology, University of New Mexico, spoke of work which she was doing at — with friends who did not know they were informants, on a study of child training and its outcome. She observed that the children were more adapted to their culture than were white children. Dr. Hawley used the birth of her own child to gain admittance into the kinship system and was considered a sister of the informant. Her child was regarded as a relative, and offers were made to teach it the language, dances, and customs.

Mr. Odd Halseth, of the Pueblo Grande Laboratory, Phoenix, Arizona, told of an early difficult situation at Zia. The Office of Indian Affairs had wanted the Indians to bring up their children in the American culture. At Zia, however, the older people reacted so violently to these ideas that all holders of white ways were denied food and water. Because of this the people were becoming reactionary. Mr. Halseth suggested an organization which would undertake a supplementary documentation of changes in the pueblos every ten or twenty years.

The discussion of Indian Ethnology was concluded by Dr. Ralph Linton, professor of anthropology, Columbia University, who observed that in William Whitman's studies of the influence of commercialization of pottery-making at San Ildefonso the economic head-ship was shown to be shifting from the men to the women.

Dr. Clyde Kluckhohn brought up the subject of ethnological work in Spanish-American communities in his report on the work of Mrs. Florence Kluckhohn. Mrs. Kluckhohn had studied dichotomy in a stockraising and agricultural community which was not aware of being studied. She obtained detailed economic data which were soon to be published, Dr. Kluckhohn said.

Mr. Donovan Senter, research associate, University of New Mexico, continued with a discussion of genealogies collected in a small community near Taos where classes in adult education had been started. Mr. Senter said that lax marriages and a complex system of child adoption complicated the kinship patterns of this community, which was in the acculturation stage. The old economic system had broken down and the community had lost its self-respect. Mr. Senter believed that the fact that Spanish was spoken in the homes and English at school might explain the so-called low intelligence of the community. He also thought that a revival of arts and dances should help lift the self-respect of the community.

The last person to report in the session of Ethnology was Dr. J. C. Weckler, University of Chicago, who described his work in a small

New Mexican village with a population of 140. Dr. Weckler stated that while the people raised most of their foodstuffs, Federal relief and the weaving of Chimayó rugs gave them other food sources. They showed some degree of social integration, according to Dr. Weckler. Their genealogies could be worked out to a great detail and completeness.

Afternoon Session, August 14th

Subject: Archaeology

Dr. Frank H. H. Roberts, Jr., Bureau of American Ethnology, Washington, D. C., acted as chairman of the session on Archaeology. Ing. Ignacio Marquina, Instituto Nacional de Antropología, Mexico, commenced the session with an instructive discourse on architecture for central and southern Mexican cultures.

Sr. Eduardo Noguera, Instituto Nacional de Antropología, Mexico, began his discussion by stating that the earlier anthropologists studied hieroglyphs. He continued by outlining the three cultures in the valley of Mexico—Archaic, Toltec, and Aztec—which were discovered in 1910 by the International School of Archaeology. He said that in 1927 Valliant established two divisions of the Archaic period—Zacatenco-Copilco and Ticomán-Cuicuilco. According to Sr. Noguera, Teotihuacán experienced seven occupations which took the culture through from three to five periods. He reported that stratigraphic cuts had been made for the purpose of studying the pottery, in order to determine its connections with types outside the valley. Sr. Noguera said that among the workers who were trying to correlate the various Mexican cultures with each other and with those of other areas were Sterling, who had found a pre-Mayan culture and a later one connected with the Mayan in southern Vera Cruz, and Brand, who worked in Michoacán and Guerrero.

Dr. Isabel Kelly, research associate, University of California, discussed her work in Sinaloa, where she and G. F. Ekholm found an undated red ware that appeared to be Southwestern. In addition, they found, from Sinaloa south, a continuous culture which was essentially Mexican but which showed no specific affiliation with present Mexican cultures.

Mr. W. S. Stallings, Jr., of Harvard University, reported that in some current work in the northern plateau of Mexico the most significant occurrence was the recognition of sixteen different pottery types, of which eight were distinctive Durango wares and a few were trade wares. He said that there was a suggestion of chronological order in the finds but that none of the material was early enough to provide evidence for a coastal or highland trade route.

Mr. Walter W. Taylor, Jr., Peabody Museum, Harvard University, concluded the discussion of Mexican Archaeology. He said that there were several types of pottery in Coahuila, two of which could be correlated with Stallings' classification. Mr. Taylor believed that

there might be a possibility of correlating the Coahuila region with the Zacatecas and Conchas regions, or perhaps even with Texas. He suggested a cultural passage along the mountain ranges flanking the plateaus of central and northern Mexico.

Dr. Roberts introduced the subject of early man in the Southwest with one of his clarifying summaries of the situation in the field up to the present date.

Dr. Frank C. Hibben, University of New Mexico, described the stratigraphy of Sandia Cave. Beneath the thick stalagmitic crust he found a layer containing Folsom and Folsomoid points. Beneath this was a sterile ochre layer separating the Folsom level from the earlier Sandia level, which contained Solutrean-like points. The crust and the ochre indicated wet periods, Dr. Hibben said, which could possibly be correlated with the Wisconsin glaciation. The Sandia layer was dated by Kirk Bryan as 25,000 years old, plus or minus 30 per cent.

Mr. Joe B. Wheat, Texas Technological College, reported in his discussion of Abilene site on the banks of the Brazos River, Texas, that points had been found there as deep as 33 feet. The lowest layers were heavy Durst silts, dated by Leighton of Illinois as 70,000 years old. Points found in this layer were bevelled on opposite sides and the blade was twisted away from the axis of the base. One was found associated with a mammoth bone. In site No. 1 there were five superimposed culture levels, the lowest of which was correlated with Yuma. Dr. Ray found Yuma, Abilene, and Folsom points on the same level.

A discussion of dating in the Southwest was offered by Dr. Ernst Antevs, research associate, Carnegie Institution of Washington, Globe, Arizona. According to Dr. Antevs, sites in the Texas region probably go back to the last part of the glacial, which ended 9,000 years ago in the North and East, and 10,000 years ago in the Southwest. He said that the methods of dating were of necessity geological rather than anthropological; the beginning of the Recent was marked by a rise in summer temperature, which showed up in the flora, fauna, and geology of the period. Dr. Antevs stated that the period of probable introduction of man into the Southwest was one in which there was an increase in evaporation of water from rivers and pluvial lakes, bringing drought. He said that later there was an increase in precipitation and in the number of glaciers which was called the "Little Glacial." It was at this time that the Sierra Nevada and Rocky Mountain glaciers were reborn. Dr. Antevs said that Pyramid Lake in western Nevada was used for dating because during the pluvial the level of the lake did not rise over fifty feet above the highest level recorded in 1869 (the alluvial fan was not cut), while the pluvial lake Lahontan was 500 feet above the 1869 level.

Dr. Elmer Smith, curator, Museum of Anthropology, University of Utah, discussed Basket Maker sites in southeastern Utah that were from 7,000 to 10,000 years old. Dating in this area was done by the

levels of lakes Bonneville, Provo, and Stansbury. The caves were yielding Shoshoni, Puebloid, Basket Maker, and pre-Basket Maker material. According to Dr. Smith, the Shoshoni had recently been receiving much attention. While a great deal of the material could not be fitted into the scheme of the Southwest, Dr. Smith said that it was known that the Puebloid culture did not exist west of Wells, Nevada.

Miss Marie Wormington, curator of archaeology, Colorado Museum of Natural History, continued the Pueblo discussion by describing a site seventy miles west of Grand Junction in Utah. Here four circular structures, twelve feet in diameter, with entrances to the North were found. The masonry of these was shaped, and the structures were possibly semi-subterranean. Miss Wormington said that many laterally notched points, metates, and gaming artifacts with red hematite were found, in addition to a great deal of bone work and charred basketry lined with asphalt. Fremont Gray ware, Late Promontory ware, Deadman's black on white, Chaco black on white were all found at this site, according to Miss Wormington. Burials were found lacking the skull, upper arms, and pelvis. There was no stratigraphy which could be used to correlate this site with others for dating purposes.

Dr. Harold S. Colton, director, Museum of Northern Arizona, stated that in 1930 the Museum of Northern Arizona began a study of pit houses. These could be dated through the pine used in their construction. Two types of culture were shown to be more or less separated by the San Francisco Peaks, where the Anasazi met the Little Colorado. South of the Peaks red and brown pottery wares were found, and there were no circular kivas. South of the Grand Canyon there was a paddle and anvil culture. At the Ridge Ruin McGregor found turquoise mosaics and plastics of lac, a material secreted by insects on the creosote bush.

Dr. Roberts informed the conference that the best material that had been gathered on the Mexican contacts had been lost; it was a series of shards from Pueblo Bonito which had been examined by a number of archaeologists. He also said that in Pueblo Bonito was found a number of Macaw burials, which Macaws presumably were traded up from Vera Cruz.

Evening Session, August 14th

Subject: Archaeology (A continuation of the afternoon session)

Dr. Emil W. Haury, Arizona State Museum, University of Arizona, as chairman of the session, inaugurated the discussion with an outline of early and deeply buried sites in southern Arizona. He said that the oldest Cochise site was at Sulphur Springs. Here were found dire wolf, hickory, wolf, horse, mammoth, percussion chipped instruments, and manos. The culture was essentially a gathering one. Above this level was the Chiricahua, with the basin metate and

modern flora and fauna. The San Pedro layer, with a deeper metate and more emphasis on chipping was on top of this, Dr. Haury said. The Cave Creek culture came later, at the beginning of the agricultural horizon, with which came house-building, earth-burial, and the first pottery. E. B. Sayles, in his work in this area, found a stratified Mogollon site with an overlay of Hohokam.

Mr. Carr Tuthill, Amerind Foundation, Dragoon, Arizona, told of work on a large San Pedro site in southern Arizona, as a result of which the San Pedro culture has been tentatively divided into three phases, with the following outstanding characteristics:

1. One story compound buildings of puddled adobe. Gila and Tonto Polychromes.
2. Pithouses with reinforced puddled adobe below the surface. Gila, Tonto, and other later polychrome wares.
3. Pithouses with plastered sidewalls (comparable to Sacaton). Gila intrusive shards. Dragoon red on brown, similar to Mogollon red on brown. Inhumation.

Mr. Halseth described the situation in the Salt River Valley, Arizona, which was developed by means of modern agriculture. Mr. Halseth said that the sites had no trash piles but plenty of surface material. Canal irrigation was found in the Gila region, but not in the Salt River area. According to Mr. Halseth there was a movement in the Classic period from the former to the latter area.

Dr. Haury reported on work done in southwestern Arizona by the University of Arizona. The investigators began with 1400 A. D. sites and worked back to 800 A. D. They found that painted pottery did not appear until 900 or 1000 A. D. and that no pottery at all was actually made in that area, but that it was all brought in from the Trincheras or Hohokam areas. The area was occupied by a poor agricultural people who were in a period of cultural lag when the Hohokam and Trincheras cultures on either side were at their peak. According to Dr. Haury, the more backward group might have had some connections with Sinaloa, for they used the same types of manos, metates, and spindle whorls. He said that they apparently had mainly Yuman connections, however. They lived in *rancheria* type dwellings and buried their dead in "ramparts" on the hills.

Mrs. Dorothy L. Keur, Hunter College, New York, discussed a site northeast of Chaco, where a tower house with a cluster of hogans around it had been found. Mrs. Keur and her husband, Dr. John Y. Keur (professor of biology, Long Island University) found the pottery to be Navajo utility ware, Gobernador polychrome, and intrusive Pueblo wares (probably 18th century Ácoma, Zuñi, or Laguna). The site was dated as 1740-1750.

Others who were reported to have been working on Navajo Archaeology were Roy Malcolm (a survey of Chaco Canyon), Malcolm Farmer (a study of the tower complex in the Largo and Blanco

areas), Richard Van Valkenburgh (at Fort Defiance), and Betty Murphey (in the Crown Point and Largo areas).

A discussion of Mexican and Southwestern relationships was started by Dr. Herbert J. Spinden, Brooklyn Museum, New York, who stated his belief that mirrors showed the connections between the two areas, as did art, mythology, and the birds found at Pueblo Bonito. Dr. Roberts said that he believed agriculture to have come from Mexico because of its association with figurines which also came from that area. The fact that southwestern ball courts showed a Mexican touch was brought out by Dr. Haury.

Morning Session, August 15th

Subject: Linguistics, Ethnobiology, and Anthro-Geography.

Dr. Norman A. McQuown, Instituto Politécnico Nacional, Mexico, began the discussion with a description of modern linguistic developments in Mexico. He said that a few years ago the Mexican government found that its educational program was handicapped because the natives refused to learn Spanish and were not able to read in their own languages. To correct this situation the people were allowed to choose the language which they wanted to use in the schools. Alphabets for these languages were invented. Dr. McQuown said that the main problem for linguists lay in translating Spanish works into the Indian languages. This work was started in the Tarascan area, where 2,000 natives, of which 40 per cent were adults, had learned to read and write. The first books published were texts in agriculture and health.

Mr. Jean B. Johnson reported that work being done among the Yaqui was of the same type as that described above. He stated that alphabets had also been made for the Otomi, Totonac, Mazatec, Yaqui-Mayo, Nahuatl (Mexicano), Chinantec, and Tarahumare. In addition, he said that workers in Mexico City were interesting school children in carrying on the program in their own villages.

Dr. Leland C. Wyman said that Dr. Sapir's death had left only a few people who were actively at work and were capable of carrying on the work in the field of Navajo Linguistics. These he said were Father Berard, Harry Hoijer, Clyde Kluckhohn, and Gladys Reichard and Adolf Bitanny.

Dr. Eggan informed the conference that there were five texts at Chicago that had been compiled while Dr. Sapir was there, and that some of these were to be published soon.

Dr. McQuown reported that Pima dialects were being studied at Arizona, with the dialect of the majority group being used on maps. Robert F. Spencer, Department of Anthropology, University of New Mexico, stated that he was studying Keresan languages, which were seemingly an isolated stock, and was trying to find their relationships to other languages.

Dr. M. Maldonado K., Instituto Politécnico Nacional, Mexico,

introduced the subject of Ethnobiology with the observation that the traditional anthropologic view was that corn originated in Mexico and Central America. He discussed the theory of Mangelsdorf and Reeves, who believe that there is no clear demonstration of the origin in Mexico, but that it was in the east Andean portion of South America. Dr. Maldonado said that since corn was the basic food of the American civilizations the real point was to stress the importance of the cultural aspect.

Dr. Brand said that it was unreasonable to place the origin of corn in an area that was so poor. Mangelsdorf and Reeves selected an area practically unstudied, where there was a comparative absence of archaeological material.

The discussion of anthropo-geography in Mexico and the United States was opened by Dr. Brand, who said that it was necessary to stress the interrelationships between man and his environment. Distributional studies should also be emphasized, as should the arrival of domesticated animals and plants. The movements by which they came could have been from the South, or from the Eurasian area (according to Gladwin), or the plants could have been indigenous, Dr. Brand said. The northward distribution of various cultivated plants was plotted on a blackboard, to stimulate discussion.

Dr. Jorge A. Vivó, of the Instituto Politécnico Nacional, Mexico, said that he was speaking for Mendizabal. Systematic work in the anthropo-geographic laboratories of the Instituto Politécnico Nacional began in 1939 with a study of the environment of Mexico and its material influence. The following projects are now under way:

1. A study of the counties or municipalities as they were in the sixteenth century.
2. The making of maps of the distribution of cultures, traits, and complexes at 2000 B. C., 1000 B. C., 100 B. C., and 1520 A. D.
3. Mapping of the discoveries and explorations of the sixteenth century.
4. Mapping of the location of mining centers, in order to show the places where the Spaniards developed agriculture in relation to mining.
5. Mapping of the political and social distributions, particularly the political divisions from the sixteenth century to the present.
6. Mapping of the distribution of linguistic stocks, the physical characteristics of the native Indian population, and the distribution of cultivated plants and domesticated animals.

Dr. Ralph Linton, professor of anthropology, Columbia University, said that the upper limit of population in any given area would depend upon the balance between the protein and starch in that area. Beans and peanuts helped supply the protein. The possible ceiling of the population in the Southwest was raised by the introduction of beans.

Dr. Douglas Campbell, M.D., Mills College, California, stated that muscle tension is caused by mental anxiety. As this tension increases, he said, men need more protein.

End of the Conference

[N. B. The above paragraphs represent a digest of and abstract from longhand notes taken by three students. Errors, both of omission and of commission, may be charged against the transcribing and editing.]

LIST OF DELEGATES

David Aberle, Harvard University; John Adair, University of Michigan, and Mrs. Carolyn Adair; Professor Arthur J. O. Anderson, Eastern New Mexico College, Portales, New Mexico, and Mrs. Christine Anderson; Dr. Ernst Antevs, Research Associate, Carnegie Institution, Globe, Arizona; Professor Diodoro Antúnez, Instituto Politécnico Nacional, Mexico, and Señora Antúnez; Robert Ariss, Department of Anthropology, University of New Mexico.

Miss Flora Bailey, instructor, Springfield College, Springfield, Massachusetts; Mrs. Leon H. Blair, Missouri; Ing. Salvador Barcena, Mexico; Miss Katharine Bartlett, Museum of Northern Arizona, Flagstaff; Father Berard Haile, St. Michaels, Arizona; William Blanchard, University of California at Los Angeles; Ernst Blumenthal, Jr., Department of Anthropology, University of New Mexico; Dr. Daniel R. de la Borbolla, Instituto Politécnico Nacional, Mexico; Mrs. Laura Boulton, American Museum of Natural History; Mrs. W. F. Boyd, regional vice-president Colorado Archaeological Society, Saguache, Colorado; Dr. Donald D. Brand, head, Department of Anthropology, University of New Mexico, and Mrs. Brand and son.

Douglas Campbell, M.D., Mills College, Oakland, California, and Mrs. Campbell; Mrs. Gretchen Chapin, Department of Anthropology, University of New Mexico; Miss Barbara Clark, Department of Anthropology, University of New Mexico; Miss Florence Cline, Department of Anthropology, University of New Mexico; Miss C. Allison Clement, Columbia University; Dr. Harold S. Colton, director, Museum of Northern Arizona, Flagstaff; Miss Florence M. Connolly, University of Arizona.

Miss Helen Sloan Daniels, Durango, Colorado; Edward B. Danson, University of Arizona; Miss Annita Delano, University of California at Los Angeles; Charles E. Dibble, assistant in archaeology, University of Utah; Kenneth B. Disher, Indian Arts and Crafts Board, Washington, D. C., and Mrs. Constance R. Disher; Miss Bertha P. Dutton, curator of ethnology, Museum of New Mexico, Santa Fe; F. H. Douglas, curator, Denver Art Museum.

Dr. Fred Eggan, Department of Anthropology, University of Chicago; Miss Helen E. Elliott, Colorado Museum of Natural History, Denver; Francis H. Elmore, park ranger, Bandelier National Monument, New Mexico; Clifford Evans, University of Southern California.

Dr. Reginald Fisher, Museum of New Mexico, Santa Fe; J. F. Flora, Durango, Colorado, and Mrs. Gladys Flora and daughter; Miss Dorothy E. Fraser, laboratory technician, Columbia University; Dr. Margaret E. Fries, New York City; Miss Anne Fromme, East Falls Church, Virginia.

Mrs. Mercedes Garoffalo, Albuquerque, New Mexico.

Edward T. Hall, Jr., field representative, Columbia University; Odd S. Halseth, Pueblo Grande Laboratory, Phoenix, Arizona; Rene d'Harnoncourt, general manager, Indian Arts and Crafts Board, Washington, D. C.; Dr. Emil W. Haury, Arizona State Museum, University of Arizona, and Mrs. Hulda E. Haury; Dr. Florence M. Hawley, Department of Anthropology, University of New Mexico; Alden Hayes, Santa Fe, New Mexico; Miss Lucille Hely, Los Angeles, California; Dr. Frank C. Hibben, Department of Anthropology, University of New Mexico, and Mrs. Hibben and two daughters; Dr. W. W. Hill, Department of Anthropology, University of New Mexico, and Mrs. Hill and daughter; Dr. W. C. Holden, Texas Technological College, Lubbock, Texas, and Mrs. W. C. Holden.

A. T. Jackson, field archaeologist, Department of Anthropology, University of Texas; Mr. Jean B. Johnson, Departamento de Asuntos Indígenas, Mexico, and Mrs. Jean B. Johnson.

Dr. Isabel Kelly, research associate, University of California; Arthur T. S. Kent and Mrs. Kate Peck Kent; Dr. John Y. Keur, professor of biology, Long Island University, and Mrs. Dorothy L. Keur, instructor, Hunter College, New York; Miss Francis Killum, Laboratory of Anthropology, Santa Fe; Dr. Solon T. Kimball, Social and Economic Surveys, Navajo Reservation, Window Rock, Arizona; Dale S. King, associate archaeologist, National Park Service, Coolidge, Arizona; Miss Marguerite King, Columbia University; Eugene Kingman, Philbrook Art Museum, Tulsa, Oklahoma, and Mrs. Kingman; Dr. Paul Kirchhoff, Instituto Politécnico Nacional, Mexico; Dr. Clyde Kluckhohn, Harvard University.

Charles Lange, Department of Anthropology, University of New Mexico; Kepler Lewis, University of Southern California; Dr. Ralph Linton, professor of anthropology, Columbia University.

Dr. George Grant MacCurdy, professor, Yale University, and Mrs. Janet MacCurdy; Bill McConnell, Department of Anthropology, University of New Mexico; Dan McKnight, Department of Anthropology, University of New Mexico; Dr. Norman A. McQuown, Instituto Politécnico Nacional, Mexico.

Dr. M. Maldonado K., Instituto Politécnico Nacional, Mexico; Ing. Ignacio Marquina, Instituto Nacional de Antropología, Mexico, and Mrs. Susana Barcena de Marquina and daughter; Adolfo Best Maugard, Mexico City; Miguel O. de Mendizabal, Instituto Politécnico Nacional, Mexico; Miss Carolyn Miles, Department of Anthropology, University of New Mexico; Stanley J. Milford, School of American Research, Santa Fe, New Mexico; Miss Dorothy Morgan, Department of Anthro-

pology, University of New Mexico; William Mulloy, Department of Anthropology, University of Chicago.

Eduardo Noguera, Instituto Nacional de Antropología, Mexico, and Mrs. Margarita A. Noguera and daughter; Dr. Stuart A. Northrop, head, Department of Geology, University of New Mexico, and Mrs. Northrop and daughter; Jesse L. Nusbaum, senior archaeologist, National Park Service, Santa Fe, New Mexico.

Miss Ann Olson, Winnetka, Illinois; Miss Jane Olson, Museum of New Mexico, Santa Fe; Miss Iva Osanai, Department of Anthropology, University of Chicago.

Miss Helen Palmatary, University of Pennsylvania; Miss Penelope Pelham Pattee, Radcliffe College; William M. Pearce, instructor in history, Texas Technological College, Lubbock, Texas; William W. Postlethwaite, Colorado College, Colorado Springs.

Erik K. Reed, National Park Service, Santa Fe, New Mexico; Miss Emma Reh, Soil Conservation Service, Albuquerque, New Mexico; Mrs. Paul Reiter, Albuquerque, New Mexico, and son and daughter; David W. Rice, University of Southern California; Dr. Frank H. H. Roberts, Jr., Bureau of American Ethnology, Washington, D. C., and Mrs. Roberts; Arthur W. Rogers, Department of Anthropology, University of New Mexico, and Mrs. Rogers.

Donovan Senter, research associate, University of New Mexico; Miss Margaret B. Shreve, University of Arizona; Dr. Elmer R. Smith, curator, Museum of Anthropology, University of Utah; Robert F. Spencer, Department of Anthropology, University of New Mexico; Dr. Edward H. Spicer, University of Arizona; Dr. Herbert J. Spinden, Brooklyn Museum, New York; James Spuhler, Department of Anthropology, University of New Mexico; Howard R. Stagner, park naturalist, Petrified Forest National Monument, Arizona; W. S. Stallings, Jr., Harvard University; Ted Stern, University of Pennsylvania; Dr. Julian Steward, Smithsonian Institution, Washington, D. C.; Dr. Omer C. Stewart, Social Science Research Council fellow, and Mrs. Stewart; Mrs. Florence Sunderland, Omaha, Nebraska.

Miss Gladys I. Tantaquidgeon, Indian Arts and Crafts Board; Walter W. Taylor, Jr., Peabody Museum, Harvard University; Carr Tuthill, Amerind Foundation, Dragoon, Arizona, and Mrs. Barbara R. Tuthill.

Miss Gertrude Vaile, University of Minnesota; Gordon Vivian, National Park Service, Chaco Canyon, New Mexico; Dr. Jorge A. Vivó, Instituto Politécnico Nacional, Mexico.

Dr. J. C. Weckler, University of Chicago; Joe Ben Wheat, Texas Technological College, Lubbock; Mitchell A. Wilder, curator, Taylor Museum, Colorado Springs, Colorado, and Mrs. Wilder; Mrs. Mary Williams, Missouri; Armand G. Winfield, Franklin and Marshall College; Arnold Withers, University of Arizona; Paul J. Woolf, New York City; Miss Marie Wormington, curator of archaeology, Colo-

rado Museum of Natural History, Denver; Dr. Leland C. Wyman, Boston University School of Medicine.

Dr. James F. Zimmerman, president, University of New Mexico, and Mrs. Zimmerman.

NECROLOGY

Adler, Cyrus. Former curator of historic archaeology and historic religions in the U. S. National Museum. Passed away April 7, 1940. His age was 76 years.

Alsburg, Carl Lucas. Director of Giannini Foundation of Agricultural Economics at the University of California. Born in 1872, died at the age of 58.

Bowie, William. Engineer and Geodesist. Retired chief of Division of Geodesy of the Coast and Geodetic Survey. Wrote extensively on geodesy and isostasy. Born in 1877, died August, 1940, at the age of 63.

Coolidge, Dane. Author, naturalist and expert on Indian and cowboy lore. He was associated with Stanford University, U. S. Biological Survey, and U. S. Museum of Natural History. Died August 8, 1940, at the age of 76.

Davis, Philip Haldane. Died February 20, 1940, at his home, Poughkeepsie, New York. Born March 10, 1902. He was chairman of Department of Greek at Vassar College. Worked on inscriptions at Eleusis, Athens, and Delos.

Dörpfeld, Wilhelm. Died April 26, 1940, at the age of 87. Authority on scientific archaeological excavation. Work was in the Near East and Classical World.

Eisen, B. Augustus. Biologist, archaeologist, and author. He developed the fig industry in California and secured protection for the giant sequoias. In 1922 he printed a monograph on the Chalice of Antioch. Born in Stockholm, died October 29, 1940, at the age of 93.

Gautier, Emile Felix. French geographer and authority on Algeria, the Sahara, and French African possessions, passed away January 16, 1940, at the age of 76.

Gilmore, Melvin Randolph. Curator of ethnology at the University of Michigan. Died July 25, 1940. Age 72 years.

Grenfell, Sir Wilfred T. Died October 9, 1940, at the age of 75. Founder of Labrador Webal Mission and was onetime rector of St. Andrews University of Scotland.

Gunther, Eustace Rolge. Expert on oceanography and marine biology. Died at the age of 37 years while in active service with a searchlight unit with territorials during the recent war.