

PECOS PUEBLO

How A.V. Kidder Made Archaeological History

EARLY IN THE EXUBERANT TEENS of this century, two young men planted the seed of a historic archaeological expedition. On an all-day outing, Alfred Vincent Kidder and Kenneth M. Chapman visited the ruined pueblo of Pecos thirty miles southeast of Santa Fe, capital of New Mexico. Both Kidder and Chapman were to make major contributions to the sciences of archaeology and anthropology in the Southwest—Chapman as a scholar and authority on Pueblo pottery, and Kidder as one of the foremost American archaeologists of his time.

At Pecos Pueblo that day, they gathered broken pottery sherds strewn by the thousands among the rocks, wild verbena, and cactus overgrowing the ruin mounds. Beneath the mounds lay crumbled the remains of the pueblo's multistoried rock and mud dwellings.

The old pueblo stood at an elevation of seven thousand feet on a narrow, flat promontory, or *mesilla*, above the floor of the Pecos River valley—a spectacular spot set among steep-walled red mesas fringed with green stands of piñon and juniper. To the west, atop Glorieta Mesa, perched Las Escobas Peak; on the northern horizon rose the snow-edged rim of the Sangre de Cristo mountain range. The road that had once been the historic Santa Fe Trail passed by the mesilla's western side, winding from Pecos through the little settlement of Glorieta and on to Santa Fe. Only

a few miles southwest and northwest of that modern town, ancient but still-inhabited Indian pueblos dotted the banks of the Rio Grande.

Serious archaeology had begun at the Pecos site before Kidder and Chapman's time, when Swiss-born ethnographer, archaeologist, linguist, and historian Adolph Bandelier explored the pueblo in 1880. His work was sponsored by the Archaeological Institute of America, an organization formed in 1879 to promote professional standards in the discipline. In 1881, the institute published Bandelier's report on the Pecos ruins and the surrounding valley.

The sherds Kidder collected on his outing with Chapman continued to intrigue the young archaeologist, and eventually led him to select Pecos Pueblo as the site of a major excavation. From the beginning, pottery was the key to Kidder's understanding of the pueblo's prehistory.

The fate of the Mesa Verde cliff dwellings in the late 1880s had underscored the need for archaeologists to investigate prehistoric Southwestern sites before they were ruined by treasure seekers. Stripped of its priceless artifacts before any archaeologist could thoroughly explore it, Cliff Palace at Mesa Verde symbolized the irreparable losses to science that occurred before the turn of the century and for years thereafter.

Urged on by many local citizens' groups and professional archaeologists, and especially by Dr. Edgar Lee Hewett, founder of the School of American Archaeology (now the School of American Research) in Santa Fe, Congress finally took action. In 1906 it passed the Preservation of American Antiquities Act. The act introduced a new era of preservation and scientific investigation at prehistoric sites in the Southwest by establishing a legal shield for sites on federal land.

In tandem with the move toward legislative protection of sites, universities and museums began training students in the most recent field methods of archaeology and anthropology. As a result, a fresh generation of professionals went into the field prepared to undertake major excavations and determined to make them "scientific."

A. V. ("Ted") Kidder's chance to dig at Pecos came in 1915 when, acting on advice from two of his graduate professors, Hiram Bingham of Yale and Roland B. Dixon of Harvard, the trustees of the Phillips Academy of Andover, Massachusetts, decided to sponsor long-term and thorough excavations at a Pueblo Indian site in the Southwest. Financial backing came from the Robert S. Peabody Foundation for Archaeology, formed in 1915 to support the new Department of Archaeology at the Phillips Academy.

The department appointed Kidder to lead the expedition, a choice also recommended by Dixon and Bingham. The previous year Kidder had received his doctorate from Harvard, becoming the first Ph.D. from an American university to write a dissertation based on Southwestern archaeology. By the time he

received his degree Kidder had traveled widely, visiting archaeological sites in the Americas, Europe, and the Middle East. He had studied with several leading anthropologists and archaeologists of the day, including the Egyptologist George Reisner, who taught modern archaeological field techniques such as the systematic excavation method called “stratigraphy.” In a class he took at Harvard with George Chase, Kidder had learned to analyze the designs and decorations on ancient Greek pottery.

Kidder chose Pecos Pueblo as the site for the Phillips Academy expedition. He first considered Aztec Ruins in northwestern New Mexico, but settled on Pecos because of its archaeological advantages: a very large trash deposit, a fascinating assortment of pottery, and its occupation in historic as well as prehistoric times.

Kidder believed that discoveries at Pecos might throw light on the prehistory of the entire Southwest. In those days, Kidder considered the Rio Grande a possible “avenue from Middle America into the Southwest”¹ along which corn, the mainstay agricultural plant in the New World, might have been introduced. Years after the Pecos Expedition, Kidder wrote that “the Pecos project was planned at a time when so little was known of southwestern archaeology that I believed it possible that the work might throw light on the origin of Pueblo culture.”²

Of special interest was the potential for understanding what kind of connection existed among prehistoric settlements at Pecos and in the Galisteo Basin to the east and the Anasazi ruins along the Rio Grande. Kidder also wanted to know more about the relationship of the Pecos, Galisteo Basin, and Rio Grande pueblos to ruin sites to the northwest in the San Juan River drainage—sites that included the cliff dwellings at Mesa Verde, ruins in Monument Valley, and the massive structures at Chaco Canyon.

At Pecos, prehistoric Pueblo culture, Plains Indian activities, and Spanish and American history all mingled. The huge village, whose inhabitants were respected by the Spanish *conquistadores* for their military strength, stood at the entrance to a strategic pass through the mountains. Plains Indians came to trade with the pueblo’s farmers and pitched their tipis just beyond the low rock wall surrounding the town.

By Kidder’s time, scholars were bringing to light the pueblo’s history during the Spanish period and the doleful story of the departure of the last inhabitants early in the nineteenth century. In 1540, when Coronado and his conquistadores ventured into *la tierra nueva* on their ever-more-desperate search for the fabled treasures of the Seven Cities of Cibola, they stopped at the pueblo, which impressed them with its size and fortifications. The Spanish called the town *Cicuye* (their mispronunciation of an Indian name).

During the next three centuries the Pecos people endured subservience to Spanish, and later Mexican, rule; raids by the Plains tribes; white man’s diseases;

and internal strife—all of which extracted a heavy toll. A new wave of traders, explorers, and settlers—this time from the United States to the east—appeared at Pecos beginning in 1821, driving covered wagons over the Santa Fe Trail, which passed in the shadow of the pueblo. In 1838 the handful of surviving inhabitants of Pecos left their homes and moved west to join relatives at the pueblo of Jemez. Pecos Pueblo remained standing, an enormous, crumbling ghost town.

With so much prehistory and history lying beneath the surface of the Pecos site, the twenty-nine-year-old Kidder faced a monumental task. His nineteenth-century predecessors in the Southwest had focused less on formulating conclusions based on analysis of data than on collecting artifacts, studying living Indians, and speculating about their ancestors. Of necessity the goals of those expeditions included obtaining artifacts as compensatory “loot” for museums and private backers. Methodical fieldwork, analysis, and reporting of results were undernourished step-children of most expeditions.

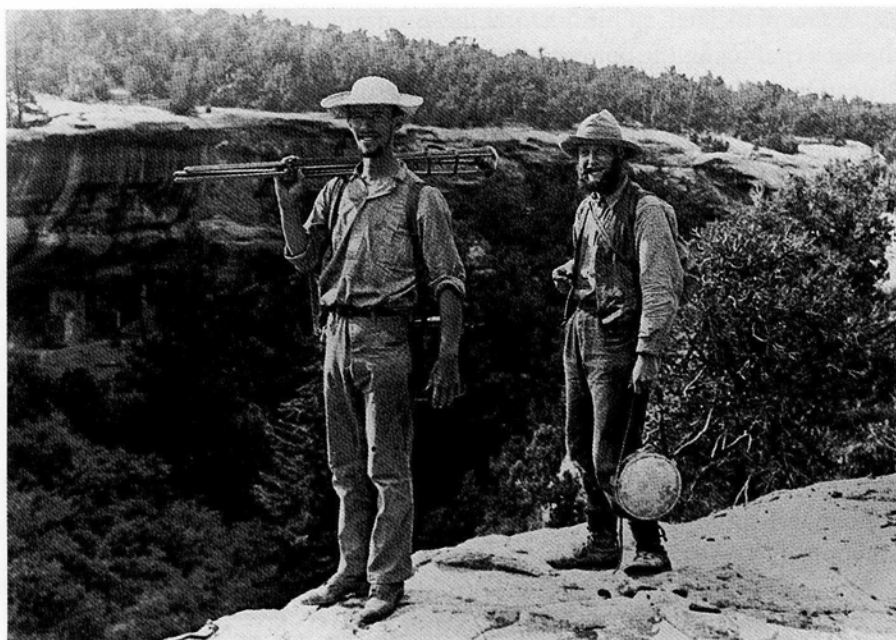
A consequence of the lack of scientific method was that the dimension of time in Southwestern archaeology remained a mystery. No one had proof to verify any hypothesis about the age of Pecos or any other prehistoric Indian ruin of the Southwest. Defining the crucial factor of time became the challenge of Kidder and his generation of archaeologists in the field.

TED KIDDER’S CHARACTER and background suited him well for leadership in the next phase of the developing science of archaeology. His biographer, Richard B. Woodbury, wrote of the Phillips Academy trustees’ decision, “The selection of Kidder was a vigorous expression of support to the new kind of archeology he represented, in contrast to the traditional excavation for the sake of collection.”³

The son of a mining engineer with Bostonian roots, Kidder was born in Marquette, Michigan, in 1885. According to his colleague Gordon Willey, “Kidder’s childhood and youth were extremely happy. One had only to listen to him tell of his early experiences to realize the warm and affectionate family atmosphere in which he grew up.”⁴

Kidder was educated in Cambridge, Massachusetts, in Switzerland, and finally at Harvard, where he enrolled as a premedical student. Within two years, however, he had switched to a different course—archaeology. Later Kidder attributed his interest in that subject partly to “heredity” and partly to “conditioning.”⁵ As a boy, he enthusiastically read scientific reports his father received from the Smithsonian Institution, the National Museum, and the Bureau of Ethnology.

Kidder’s career as an archaeological field worker began even before he graduated from college, during the summer of 1907, his junior year. Under the



Jesse L. Nusbaum (left) and A. V. Kidder above Spruce Tree House at Mesa Verde, 1908.

blazing Southwestern sun, he and two other Harvard students undertook a major project sponsored by pioneering archaeologist Edgar Lee Hewett. With virtually no training or guidance, the three young men made an exhausting, exhaustive, and fascinating survey of remote ruins in the Four Corners area of Utah, Colorado, and New Mexico. Kidder's companions were Sylvanus G. Morley, later an eminent Mayan archaeologist, and John Gould Fletcher, destined for a distinguished career as a poet and writer. Though Fletcher found he had no taste for the rigors of archaeology, Kidder and Morley were fascinated from the beginning. They formed a personal and professional friendship that became the nucleus of a group of men who directed Southwestern and Mesoamerican archaeological events in the 1910s, 1920s, and 1930s.

After that first summer in the Southwest, Kidder was "hooked" on the study of archaeology:

Kidder was one of the many men bred in the East who upon his first visit to the Southwest, in 1907, found himself under its spell. He was enthralled by its elemental exuberance, the incongruity of its young and old earth, its demands placed upon anyone who chose to be there at any season. Perhaps he could not have explained the appeal of the environment, but there is no doubt but that he could have stated the excitement he found in its archaeology.⁶

A few years later, in his doctoral thesis on prehistoric ceramics, Kidder included a chapter on the pottery he found while surveying New Mexico's Pajarito Plateau in the Jemez Mountains northwest of Santa Fe. In the thesis, which foreshadowed his contributions to archaeological method, Kidder moved into new intellectual territory:

Kidder was formulating the basis for his analyses and synthesis of Southwestern archaeology, breaking with the tradition which looked upon all of the Southwestern ruins and their contents as fascinating relics of an undifferentiated, "far away and long ago" past and, instead, seeing them as unique expressions of different times and places in that past to be fitted together to tell a coherent history.⁷

The year that he received his doctorate, Kidder also made history in the field. During the summer of 1914, with Samuel Guernsey of Harvard's Peabody Museum, he investigated prehistoric rock shelters and pithouse remains in northeastern Arizona.

In the dry caves of the Kayenta/Monument Valley region, Kidder and Guernsey found many perishable yet wonderfully well-preserved artifacts, materials such as fiber, wood, and foodstuffs. In a report on investigations in another region, Kidder later described the state of preservation made possible by the dry cave environment: "One finds little things that bring back the ancient life with startling vividness ... a stirring stick still smeared with corn meal mush, a patched sandal, a cake of salt wrapped in corn husk."⁸

Kidder and Guernsey wrote landmark reports on their explorations, highly detailed descriptions of the habitations and artifacts of a prehistoric group whom Richard Wetherill and other Southwestern explorers had called "Basket People." (Decades earlier, the Wetherills and other early investigators of archaeological sites had found similar remains at pithouse ruins at Mesa Verde and in southeastern Utah.) The meticulousness and accuracy demonstrated in the Kidder and Guernsey writings evidenced the talent for scientific reporting that would make Kidder's later books archaeological classics.

Ann Axtell Morris, wife of archaeologist Earl H. Morris, later remembered young Ted Kidder as likeable, handsome, tall, and strong — "a Viking of a man."⁹ Like the early mountain men and pioneers, archaeologists who were blessed with size, strength, and good health enjoyed a distinct advantage in the outback. It is no coincidence that several of Kidder's contemporaries, including archaeologists Morris and Jesse Nusbaum, were exceptionally strong physically. Kidder once wrote tongue-in-cheek of the two erroneous images of archaeologists conveyed in the media — "the hairy-chested and the hairy-chinned."¹⁰

Well-mannered and modest, educated into the Ivy League intelligentsia, Kidder personified the “gentleman archaeologist,” a tradition that began in Europe, where interest in “antiquities” remained an upper-class pursuit. With Kidder’s direction of the Pecos Expedition, Southwestern archaeology entered a golden era. Excavation took place in an expansive ambience of “relaxation, of freedom from pressure, of time illimitable, of unbounded opportunity for new discovery.”¹¹

Kidder’s excavation, officially known as the Peabody Southwestern Expedition at Pecos, continued under sponsorship of the Phillips Academy from 1915 to 1929. World War I, in which Kidder served and saw combat, disrupted the fieldwork that had been planned for 1917–19.

Because the expedition lasted so long, it became a major chapter in Kidder’s life and the lives of his family, who came out to live at the field site each summer. Kidder began working at Pecos fresh out of graduate school; by the time the excavations were completed, he was approaching middle age, his five children were growing up, and his scholarly career had entered mid-course.

Several of the archaeologists who contributed to the expedition at Pecos, including Carl E. Guthe, George C. Vaillant, and S. K. Lothrop, went on to successful careers in the discipline. Describing his professional crew, Kidder later wrote nostalgically, “Most of us were young and each of us was working toward the common end of learning what we could of the forces that shape human destinies.”¹²

The work crews at the dig included Hispanic Americans from the town of Pecos and surrounding areas, as well as some descendants of the Pecos Indians who built the pueblo. Among the crew was Gregorio Ruiz, son of Mariano Ruiz, who had worked for Adolph Bandelier.

Excavation began on a late spring day, June 6, 1915. In determining where to dig first, Kidder used old Spanish accounts describing the layout of the pueblo and the writings of Bandelier, as well as his own observations. The two largest buildings appeared to be the old pueblo at the northern end of the mesilla and, to the south, the seventeenth-century adobe church, built by the Pecos Indians under the direction of Spanish Franciscan missionaries.

The crumbling ruins of the church, whose mud bricks were dissolving in the elements, presented a special problem that Kidder dealt with by calling on an old friend, Jesse Nusbaum, whom he had met during his 1907 Southwestern adventure under Edgar Hewett, Kidder’s former teacher. Hewett was then director of the Museum of New Mexico, which oversaw the Pecos ruins, and he arranged to have Nusbaum, an excellent carpenter, work on the badly needed stabilization and restoration of the mission church. Nusbaum later described his work routine at Pecos:

Altar steps of the mission ruin at Pecos during stabilization, 1915.



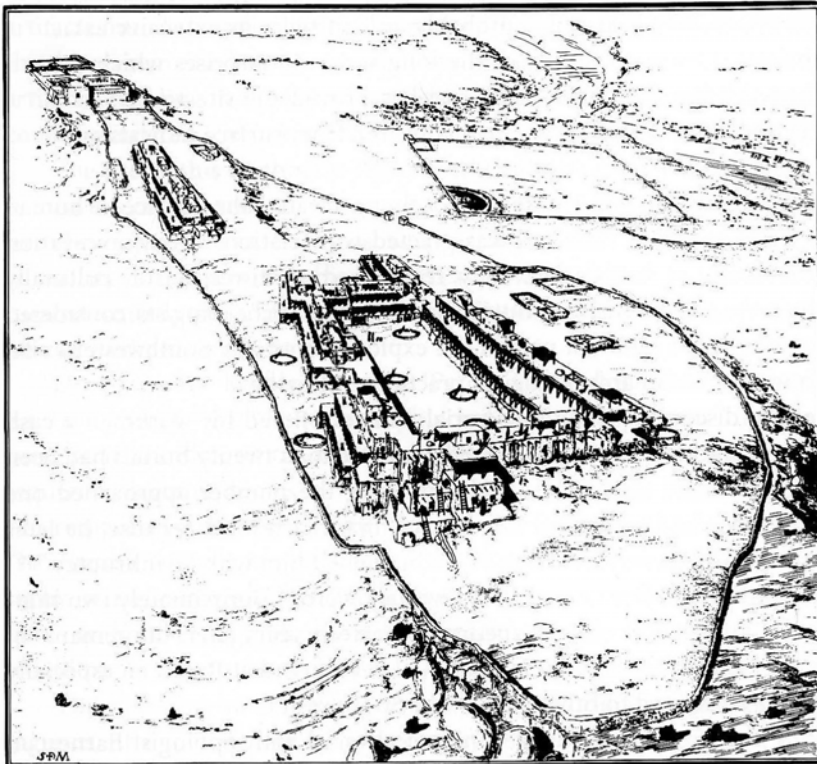
I started and went back and forth on my motorcycle. From the time the first homesteaders and squatters settled down the Pecos River, they pilfered timber for housing, sheds and corrals from the Pecos Mission. Its walls were rapidly crumbling and I put in concrete to slant it up and stabilize it.¹³

With Nusbaum handling the old mission, Kidder's main focus became the "North Pueblo." This ruin comprised the remains of a four- or five-story masonry apartment house called "the Quadrangle," which apparently was the structure that had impressed the early Spaniards with its size and defenses. Although the four-hundred- by two-hundred-foot ruin was their initial focus, the excavations took an unexpected turn when the pueblo's extensive trash heap, which Kidder had been eager to explore, yielded some dramatic finds.

Kidder knew that prehistoric Indians often buried their dead in "trash," which in Pueblo culture has sacred connotations because things that are used up are seen as returning to Mother Earth. Regarding Anasazi burial practices, one contemporary archaeologist commented that "'trash' in one culture is not necessarily 'trash' in the same sense in another."¹⁴ Because the graves contained pottery and other artifacts they revealed much about the prehistoric people, and the skeletal remains could be analyzed for clues to the population's life span, health, and diet.



Top: The Pecos ruin photographed from the air by Charles A. Lindbergh, 1929. Bottom: Pecos from the north, artist's reconstruction of the pueblo circa 1700 by Singleton Peabody Moorehead, published as figure 22 in "Pecos, New Mexico: Archaeological Notes" by A. V. Kidder (1958). The mission and convent are shown in the upper left.



On the surface, the very large rubbish deposit adjoining the main pueblo looked like a rock-strewn slope, extending out from the defensive wall on the east side of the mesilla for about a quarter-mile. Prehistoric inhabitants had tossed trash downwind over the embankment, and over time the debris had drifted into the gradually sloping deposit. As they dug into the deposit, Kidder's work crews turned up layers of decayed organic matter combined with wind-blown sand, charcoal and ash from prehistoric fires, and decomposed adobe mud. Like plums in a Christmas pudding, prehistoric artifacts were mixed in with the dirt.

The archaeologists were amazed when they discovered that the trash heap extended much further beneath the pueblo itself than they had expected. One section of the pueblo's defensive wall was actually built, not on solid ground as they originally thought, but on deep trash deposits. In fact, the trash came all the way up to the walls of the Quadrangle and turned out to be over twenty feet deep. Kidder wrote,

We found that the whole broad terrace between the ruin-mound and the defense wall was made up of nothing but rubbish. . . . We had learned early in the season that the refuse heap was very large, but this latest discovery showed that it was probably at least twice as extensive as . . . estimated. This was the first of the long series of surprises which the Pecos work has furnished. Each one has proved the site to be vastly larger and more complex than had appeared from surface indications.¹⁵

Almost as soon as the workers' shovels penetrated the surface, a human skeleton came to light. This find was greeted with elation. Today, excavation of Native American burials is widely recognized as disrespectful, culturally discriminatory, and insensitive. But in Kidder's day, archaeologists considered burial excavation an essential part of the exploration of any Southwestern site. In fact, it was common archaeological practice worldwide.

After the discovery of the first burial, Kidder offered his workmen a cash reward for each additional burial unearthed. More than twenty burials had been found by the end of the week, and before long the number approached one hundred. Kidder had to rescind his offer of financial reward because, he later commented, the abundance of such finds threatened him with "bankruptcy."¹⁶

In all, during the first season the crews uncovered approximately two hundred burials. By the end of the expedition fourteen years later, the remains of more than nineteen hundred individuals had been found at Pecos, an especially high number compared to other sites in the Southwest.

During the 1920 season, Kidder invited physical anthropologist Earnest A. Hooton, of Harvard University's Peabody Museum, into the field at Pecos.

Hooton spent two months at the site, and a decade thereafter in his laboratory, examining and analyzing the skeletons. "Hooton's work there was one of the earlier examples of a physical anthropologist working alongside an archaeologist in the field."¹⁷

Including Hooton on the team was a step toward pan-scientific archaeology, an approach that remained important to Kidder throughout his career. "I still feel," Kidder said in an interview late in his life, "that the only way we are eventually going to get the real meat from archaeological work in terms of cultural development [is] by using ... all the pertinent sciences ... social and natural and environmental."¹⁸

The trash heap at Pecos offered more than burials and artifacts. Its undisturbed layers, deposited gradually over centuries, provided an excellent testing ground for Kidder's successful use of the then-innovative, now standard, field technique of stratigraphy.

American archaeologists of the day were familiar with the basic concept underlying stratigraphy, the idea of "superposition," which derived from the science of geology: The most recent material would be found on the top, and each underlying layer would represent an older deposition. Applying superposition to archaeology, the assumption was that objects found at lower levels predated artifacts found in upper layers. Excavators therefore dug carefully, making sure that layers remained clearly intact. They numbered each layer and labeled each artifact according to the layer from which it came. Thus, level by level, artifacts could be ordered from oldest to most recent.

The use of this method at Pecos marked the beginning of the period when Southwestern archaeologists began to grasp prehistoric time in terms of "relative chronology," in other words, what predated what. Because the upper levels of the site included metal objects, such as candlesticks, and other items that indicated historic times, chronological calculations could be made from recorded history back into prehistory.

Decades after Kidder's work at Pecos, archaeological commentator Walter Taylor wrote that the stratigraphic approach was perhaps "the most basic concept in the theoretical structure of the discipline."¹⁹ Although the idea of sequential layering seems obvious now, in Kidder's time stratigraphic digging was regarded as an exciting experiment. Later archaeologists would refer to the "stratigraphic revolution" of Kidder's era, saying that the introduction of stratigraphy in the Southwest "initiated truly scientific archaeology in America."²⁰ Certainly without stratigraphy the study of prehistoric chronology in the Southwest would have no basis for precision.

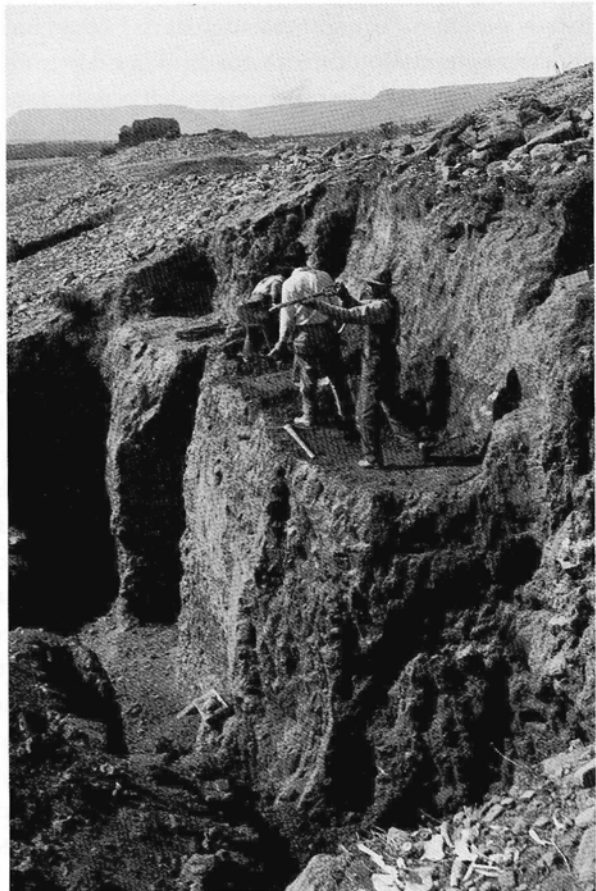
The majority of nineteenth-century New World "antiquarians"—an ambiguous title that included archaeologists—supposed that prehistoric Southwestern Indian culture was not complex enough, nor had it lasted long enough,

for stratigraphic efforts to be worthwhile. So, although archaeologists in Europe and the Mediterranean regions used the technique regularly, and a handful had tried it in the 1800s in the United States, at the turn of the century few American excavators bothered with it.

Then, just before Kidder began to work at Pecos, two archaeologists produced intriguing results with stratigraphy at New World sites. The pioneers were Manuel Gamio, who used the technique at excavations in the Valley of Mexico in 1911, and Nels C. Nelson, who applied it in the Galisteo Basin of New Mexico between 1912 and 1914.

Nelson's work marked a major scientific turning point in the Southwest. He later wrote to archaeological historian Richard Woodbury: "My chief inspiration to search for chronological evidence came from reading about European cave finds; from visiting several of the caves, seeing the levels marked off on the walls."²¹ Woodbury described Nelson's work:

Digging a stratigraphic test.



When Nelson investigated the Galisteo Basin in the summer of 1912, one of his aims was the establishment of a chronology for the several types of ruins and numerous styles of pottery already familiar to those studying the ruins of the Rio Grande region. . . . None of the refuse mounds that were trenched in 1912 and 1913 fully satisfied him. . . . Late in the season of 1914 Nelson found a satisfactory deposit at Pueblo San Cristobal which showed no signs of disturbance in the 10-foot face that was cleared. He marked out a block 3 by 6 feet and dug it out in 1-foot levels, saving all the sherds encountered. Nelson comments that he did all the digging himself, not trusting to the care of his workmen. The sherds were classified into seven "types," each "sufficiently distinct" although admittedly arbitrary in definition; they were then counted and their numbers plotted by levels.²²

Kidder followed Nelson's lead at Pecos. His workers used shovels to break ground and load "backdirt" into wheelbarrows, and spades to dig and then carefully smooth down, or "face," the sides of the trenches. The workmen created three-sided test columns in the earth, and the archaeologists then observed and marked stratigraphic layers in them. Unlike Nelson and other American excavators, Kidder defined the stratigraphic layers according to the natural layers appearing in the earth, rather than marking off the levels in arbitrary, uniform increments.

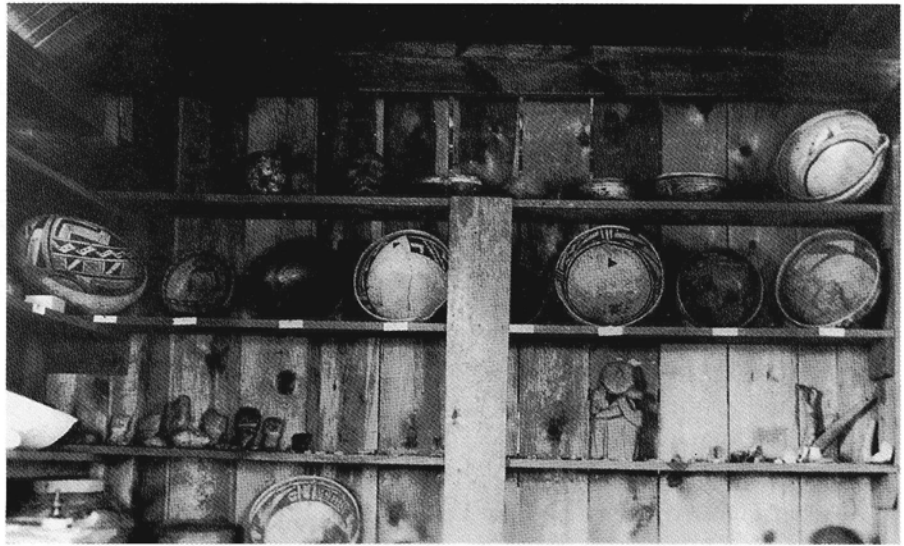
The archaeologists noted the positions of artifacts on a grid that they laid over the dig with numbered stakes, and on maps and plans of roomblocks, so that items could be located both vertically and horizontally—that is, in time and space. In creating this time/space framework for recording artifacts, the Pecos Expedition began to make scientific history.

Unlike modern-day archaeologists, who generally set out with a set of narrowly defined research questions to be answered and hypotheses to be tested, Kidder—like his contemporaries at other major excavations—began with an open mind, simply digging and carefully listing and describing everything he found. Right from the start, Kidder made detailed lists of his findings, which helped him begin to categorize the pottery and other artifacts. He proposed to gain knowledge of the vanished peoples of the Southwest by organizing, classifying, and comparing their "material culture," or artifacts, and their architecture.

Though he used stratigraphy in excavating all objects, Kidder paid particularly close attention when removing and recording pottery. Once organized and analyzed, the whole pots and hundreds of thousands of sherds gathered at the site began to tell the history of centuries of pottery making at Pecos Pueblo.



Above: Painted wooden ornament found c. 1915 in the Pecos mission ruins. At right: "Shelves of the workroom after a good day," a scrapbook photo from the Phillips Academy, Andover, excavations at Pecos.



The archaeologists bagged, boxed, and shipped tons of artifacts to the East for study during the winter months. While at the site, they also spent long evenings cleaning, classifying, and analyzing the finds. First, they examined each potsherd and matched it with others like it. Then Kidder, his wife, Madeleine, and his assistants detailed the attributes of the ceramics—their thickness, shape, decoration, color, and finish. The resulting categories showed how pottery had developed at Pecos over hundreds of years.

The Pecos potters had created a rich variety: plain cooking wares; early white-slipped pottery painted with black designs, called "black-on-white" by the archaeologists; and various glazed wares, including black-on-red, black-on-yellow, plain red, and polished black wares. These vessels were used for cooking and eating, and for carrying and storing food, water, and other necessities.

Eventually, Kidder and other archaeologists at the dig wrote extensive reports about the eight major categories of pottery found at Pecos. In his early conclusions, Kidder stated that

work on these potsherds showed that there had been a steady and uninterrupted growth in the ceramic art of Pecos from the days of its founding down to the period of its abandonment in 1838. It was possible to establish eight major pottery types and to determine their exact chronological sequence, thus confirming and in many ways amplifying similar results then being obtained by Nelson at the ruins of the Galisteo basin a few miles to the west.²³

Kidder later collaborated with ceramic analyst Anna O. Shepard, whose studies of the composition of clay and temper led him to conclude that early in their history the people of Pecos had imported pottery from the Santa Fe area, the Pajarito Plateau, and the Galisteo Basin. Kidder and Shepard summarized their findings in *The Pottery of Pecos, Volume II* (1936), presenting highly detailed analyses that superseded many earlier conclusions about the development of Pecos pottery. But it was the initial ceramic studies, done during the excavations, that permitted the identification of the relative chronological sequence of the ceramics.

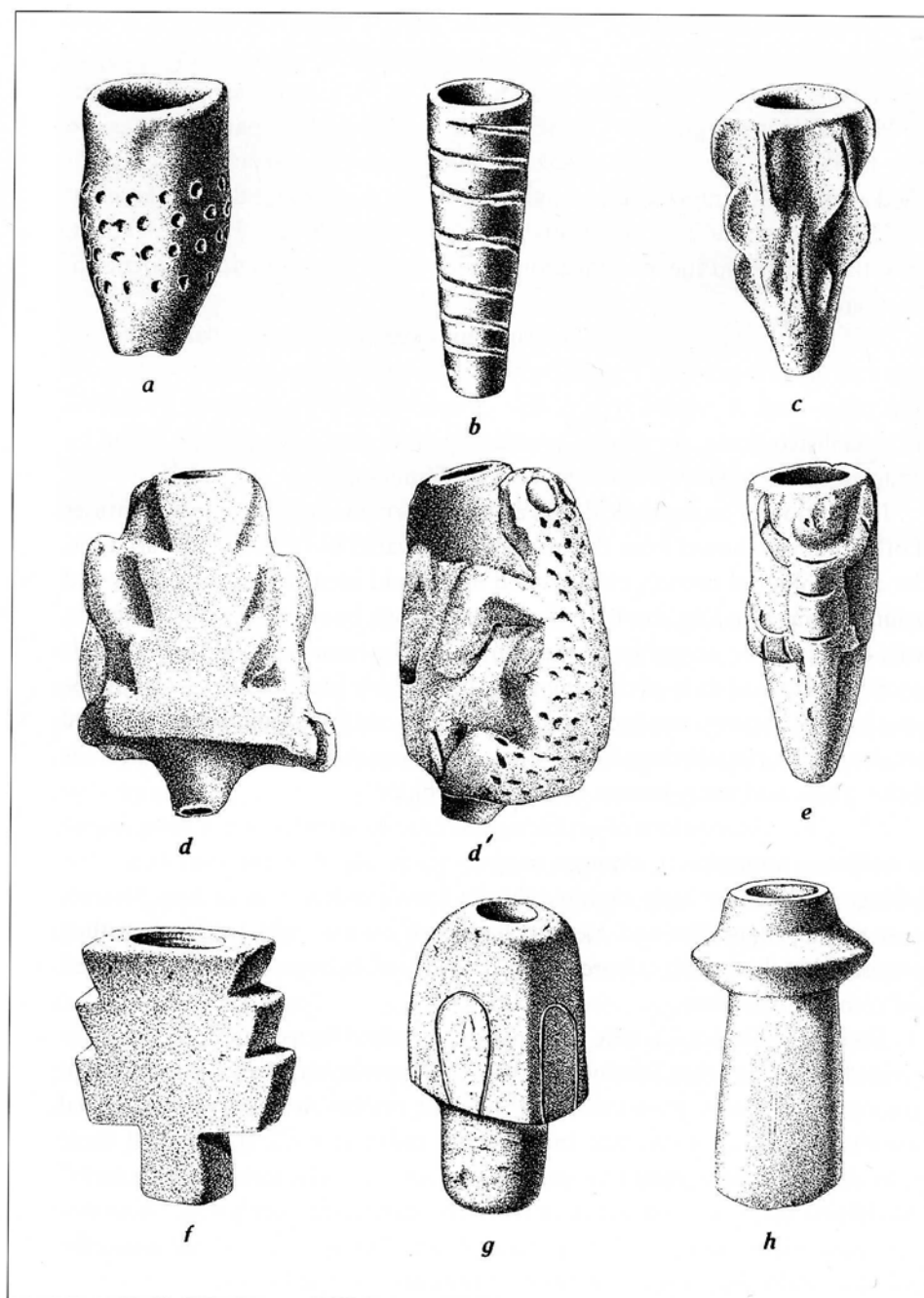
This sequence provided the information needed for relative dating of artifacts and made it possible for Kidder to “cross-date” Pecos artifacts with those from other sites. A certain type of Rio Grande-style pottery found by Nelson in the Galisteo Basin, for example, could be compared with pottery found by Kidder at Pecos and dated as older, newer, or contemporary with it.

In addition to ceramics, Kidder’s artifact lists contained immense quantities of other items removed from the trash and excavated blocks of rooms at Pecos. The archaeological cornucopia included household utensils such as *manos* and *metates* (hand grinding stones and grinding slabs); bone tools, such as knives, awls, and needles; arrowheads and hunting paraphernalia; bones of animals butchered for food; bits of clothing and sandals; hair brushes and personal objects; jewelry of turquoise, bone, and shell; bird bone flutes; and human skeletal remains and burial offerings from graves, including many whole pots, hundreds of clay pipes, and many human and animal effigies.

Using his observations of artifacts, and later of architecture, Kidder began to outline a sequence of changes in the way of life at Pecos over time. His findings showed that early explorers in the Rio Grande region of New Mexico, most notably Bandelier and Hewett, had been on the right track when they surmised that the Indian cultures there had, indeed, become more sophisticated and complex over time.

Eventually Kidder was able to compare and relate Pecos ceramics and architecture to those at other Southwestern sites. The prehistoric peoples of different geographic locations, it seemed, had different pottery styles, masonry, burial customs, and other distinctive traits. Based on their understanding of these traits, archaeologists created an overview of several prehistoric “culture areas” and defined the major cultural districts of the prehistoric Southwest. These districts were named after the river drainages: the Rio Grande, the San Juan, the Little Colorado, the Upper Gila, the Mimbres, and others.

Among these prehistoric culture districts, two of the most important were the San Juan district, which included the Chaco Canyon, Mesa Verde, and Kayenta ruins, and the Rio Grande area, encompassing Pecos Pueblo and the



"Pipes unusual in shape or decoration." This plate, showing objects excavated at Pecos Pueblo, originally appeared as figure 150 in A. V. Kidder's "The Artifacts of Pecos" (1932).



Bowl designs of the pottery type known as "Biscuit A." Figure 34 in Kidder's "The Pottery of Pecos," volume I, "The Dull-Paint Wares" (1931).

still-inhabited pueblos along the Rio Grande. The key concept explored by archaeologists became “relationships over time”—connections among artifacts, the various groups living throughout the prehistoric Southwest, and these peoples’ patterns of settlement.

AS THE YEARS PASSED, the Pecos expedition settled into its routine of camp life and archaeological work. For the Kidder family, Pecos was a glorious experience. “First, it was a grand place to be with kids,” remembered Kidder.²⁴ Kidder’s daughter Barbara remembered the family’s home at Pecos: “Our house, our dear adobe house of three rooms front and three rooms back with a double sleeping porch to one side.” At the beginning of each season, workmen pitched the expedition tents nearby, “in a remote corner of Forked Lightning Ranch,” in the valley just south of the main pueblo ruins.²⁵

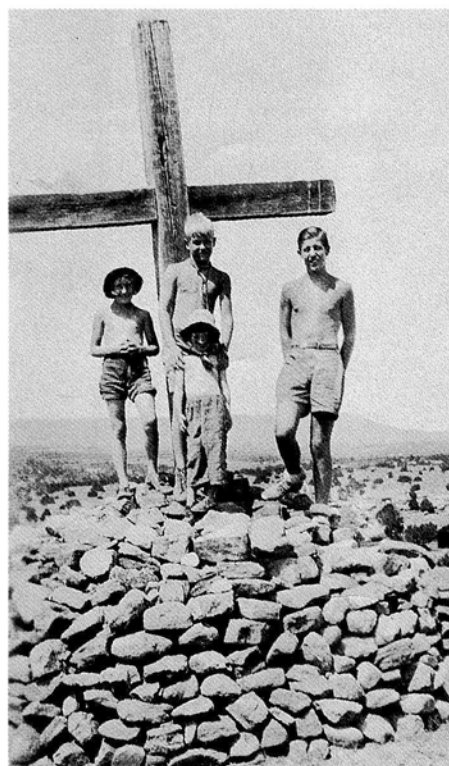
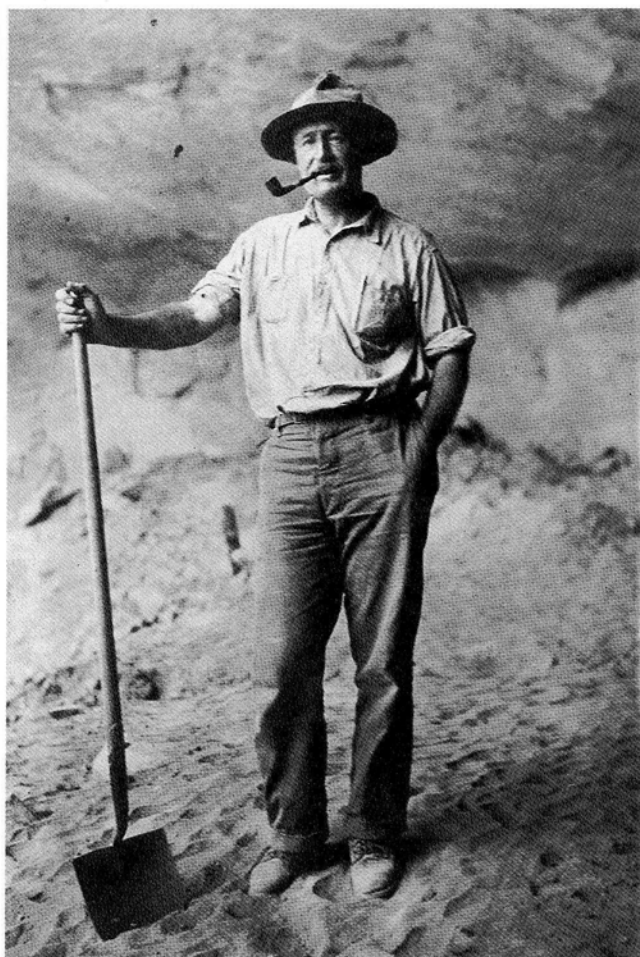
Groceries, visitors, construction supplies, mail, and other necessities and niceties were brought to camp in “Old Blue,” Kidder’s trusty Model T. “It was a very famous car,” Kidder remembered, on which Jesse Nusbaum had “painted on the back in large letters ‘I do not choose to run in 1928.’”²⁶ Archaeologist Neil Judd later described Old Blue and its ilk:

Its original floorboards had long since gone for fuel, but where Kidder wanted to go Old Blue found a way. . . . Model T’s were everywhere in the 1920’s. . . . Like Navaho sheep they stood well off the ground; they were designed to straddle high centers, to go where any other four-legged creature could go.²⁷

At the dig the archaeologists, neatly dressed in business suits, made index cards with sketches and descriptions of each burial and wrote up their notes on each excavated room. Meanwhile, workmen with picks and shovels labored under the intense, high-altitude summer sun that turned them into bronzed athletes. They arrived at 7:00 A.M. to begin an eight-hour day for which they were paid \$1.50. Horse-team drivers received double that daily wage.²⁸

The archaeologists’ family members were also put to work. Madeleine Kidder handled the enormous task of sorting the pottery sherds, which numbered in the hundreds of thousands. “I doubt if any other human being has handled so much broken pottery,” Kidder wrote of his wife’s efforts. “Her work required a thorough knowledge of types, an ability to judge as to what should be saved and what discarded, and a keen ceramic sense to recognize at a glance any sherd, no matter how small, which did not conform to local standards.”²⁹

Barbara Kidder remembered well her parents’ daily work: “I loved watching the careful cleaning of a skeleton with pen knife and soft brush, Mother’s hands fitting together fragments of a pot.”³⁰ She recalled, too, evenings spent telling



Top left: Alfred Vincent ("Ted") Kidder, c. 1925, at the White House ruins at Canyon de Chelly. Top right: The four Kidder children at the Pecos mission church, 1924: Barbara, Randolph, Alfred II, Faith (in front of Randolph). At left: "Old Blue" and "Pecos Black," famous cars of the Pecos expedition, 1923.



Top: The 1924 excavation crew. Bottom: Crews at work at the Pecos excavation.

stories around the campfire, and afterward, “bedtime as the fire burned lower and the stars showed near enough to catch and the coyotes began their weird wild wonderful songs—the scent of juniper and piñon and the green grass that grew only under the eaves of the sleeping porch where the rain water fed it, and the moon and the quiet night.”³¹

Kidder had planned to complete the expedition’s work by 1922, but numerous unanticipated discoveries resulted in several seasons of additional digging. Excavating the many-storied stone and mud dwellings took years of patient, careful labor in crumbling and dangerous masonry.

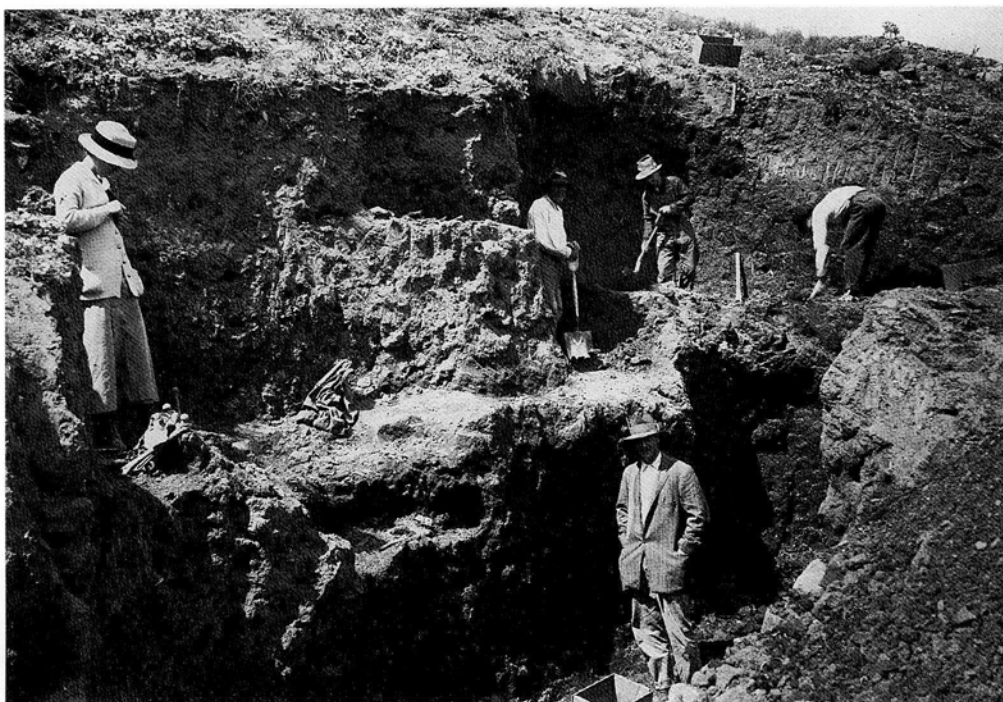
There were major surprises during the second season of the dig. The North Terrace, a seemingly vacant area on the north side of the Quadrangle, was discovered to contain “forty rooms, a kiva, and no less than two hundred burials,” Kidder wrote in 1924. “I believe . . . that on the North Terrace lay the nucleus of the Pecos pueblo.”³² The buildings had not been constructed on bedrock, as the archaeologists had expected; instead, the top structures were “erected on the broken and tumbled walls of earlier houses, and . . . these again had been built over at least two still more ancient ones.”³³

Slowly, a fascinating picture of many centuries of Indian life at Pecos emerged. Thanks to his meticulous stratigraphic records of the various types and styles of pottery at the pueblo, Kidder could date each architectural level according to its prevalent ceramic type. As the years passed, and in light of new scientific discoveries, analysis of the artifacts and architecture of Pecos led to conclusions somewhat different from those Kidder had first anticipated. New dating technologies indicated that building on the mesilla must have begun around the thirteenth century AD. The initial mesatop settlement on the North Terrace, which Kidder called “Black-on-white House” after its predominant style of pottery, was followed by construction of the multistoried Quadrangle, as people moved from earlier settlements in the valley to the mesilla’s promontory, perhaps for defensive reasons.

Kidder used the chronology created from the pueblo’s pottery to set relative dates for the architecture. Of the Quadrangle on the mesilla, he wrote: “The former straggling one-story community was pulled together, so to speak, during the first years of Glaze III. A compact, four-sided, multistoried pueblo was built around a spacious courtyard.”³⁴

The Quadrangle, the fortress pueblo described by the Spaniards, had apparently been built, not gradually like other parts of the pueblo, but in a very short period of time. Its construction date was eventually set at about 1400, an estimate still considered valid.

Danger threatened the expedition’s workers as they cleared the Quadrangle rooms of their centuries-old fill. If not properly angled and reinforced, the freshly dug sides of the excavation trenches might collapse, smothering the workers in



A. V. Kidder (lower right) surveying trenches in the north midden at Pecos, 1915. Kidder is wearing a suit, as was customary for professional staff at the dig.

a deadly avalanche. Taking these perilous conditions and other factors into account, Kidder decided to content himself with only “a preview” of rooms in the Quadrangle.³⁵

At times the archaeologists found the stratigraphy in the rooms in topsy-turvy disarray. Centuries before, the prehistoric occupants had dug in certain places—to bury their dead, or to remodel their homes. As a result, the oldest material sometimes lay on top, and the most recent on the bottom.

Kidder remarked in a later report that it was a good thing his staff had done their stratigraphic homework carefully while excavating the trash during the first season. “Without it,” he wrote, “my colleagues and I would have been hard put to it to make any sense out of the horrible smash we had to deal with in the ruins.”³⁶

As the digging progressed, Kidder identified six architectural phases on the mesa top. He estimated that the multistoried Quadrangle and its neighbor, the “South Pueblo,” had encompassed a total of about eleven hundred rooms. The Quadrangle alone had once comprised some 660 rooms, but his crews cleared only a small percentage of them.

Once excavations were completed, Kidder had the crews “backfill” the uncovered rooms. Refilling the rooms with the dirt that had been laboriously

removed earlier left the ruin protected from the elements, as it had once been under the grass-covered and rock-strewn mound that nature had created over time. Like stratigraphy, backfilling became a standard procedure of professional archaeology.

When Kidder left Pecos, two-thirds of the ruin remained unexcavated. Nevertheless, at the time no other archaeological site in the Southwest had been so carefully and scientifically scrutinized.

Kidder's findings at Pecos inspired one of his lasting achievements, a volume titled *An Introduction to the Study of Southwestern Archaeology, with a Preliminary Account of the Excavations at Pecos*, published in 1924. It was "a book that was romantic but not ridiculous, scrupulously close to the facts but not a boring recital of them."³⁷

The volume's introduction made a significant contribution to the growth of Southwestern archaeology as a science, and especially to the concept of Southwestern culture areas. Its synopses of the modern pueblos, their prehistoric counterparts, and the major prehistoric Southwestern cultural regions and groups have been used by every generation of archaeologists since its publication, and the study is still helpful to archaeologists today.

The Pecos expedition produced not only Kidder's classic but several other landmark reports. Earnest A. Hooton's monumental work, *The Indians of Pecos Pueblo: A Study of Their Skeletal Remains* (1930), traced the diseases, life expectancy, and demographics of the pueblo over time. Several other studies by scientists working with Kidder contributed significantly to ceramic analyses and ethnography.

In 1958, decades after the fieldwork had been completed, Kidder published his summary of the expedition's work, a thick volume with the modest title, *Pecos, New Mexico: Archaeological Notes*. Like his earlier works on Southwestern archaeology, *Archaeological Notes* remains a classic, exceptional in both scientific detail and literary style. Though the book was well received, Kidder felt it contained numerous shortcomings. In a review, his colleague Guthe wrote,

Dr. Kidder, like all good archaeologists, suffers from a feeling of inadequacy—a conviction that the record should have been more complete. . . . Yet the fact remains that it is a tremendous achievement to be able, after a lapse of thirty to forty years . . . to incorporate in this report such a wealth of detail and significant factual data.³⁸

Just a few years before the publication of *Archaeological Notes*, Southwestern archaeologists of the American Anthropological Association established the A. V. Kidder Award, presented every third year to one of their group "for eminence in the field of American archaeology." The award remains a symbol of

professional respect for Kidder's achievements and contributions to the discipline.

Kidder had a few critics, chief among whom was an intellectually incisive iconoclast, Walter W. Taylor, who pointed out weaknesses in Kidder's descriptive reporting. In a 1948 publication, *A Study of Archeology*, Taylor debunked the work of the archaeologists of the early twentieth century as superficial and scientifically insubstantial. He argued that prehistoric cultures should be examined in terms of their "social processes" and organization, which he felt could be deduced from factors such as sizes of rooms, arrangement of roomblocks, and changes in pottery styles.

Though helpful to post-World War II archaeological thought, Taylor's comments seemed to some unnecessarily harsh. Many argued that he criticized early archaeologists without considering their work in historical context.

Archaeologist Watson Smith later described Taylor in his memoir:

I think that Walter Taylor was a very typical example of the angry young man in archaeology. Walter himself was a vivid, volatile person who had been a prisoner of war of the Germans, and it was always a puzzle to some that they let him survive because I am sure he was a very abrasive prisoner. Anyhow, the publication of this paper, which in some degree was indiscrete [*sic*] and brash because it named names, was sensational. It focused much of its criticism upon one of the most revered American archaeologists of all, Ted Kidder . . . and it said almost in so many words that Kidder had really not carried out his scholarly obligations, and in effect pushed him aside as a fossil. I don't know whether Walter cared about this or not, maybe he did it on purpose. In any case, it did generate and point up very effectively the change that was rapidly occurring between the older generation and these new people.³⁹

Some of Kidder's colleagues noted that the aging archaeologist appeared to have been deeply hurt by Taylor's critique, apparently viewing it as a personal attack that must have been backed by colleagues whom Kidder had trusted.

Taylor's work marked the beginning of a new era of controversy, change, and increasing sophistication in the intellectual development of archaeology. One unfortunate byproduct of this shift was that attributes Kidder displayed, such as modesty, good manners, and kindness toward colleagues, seemed sometimes old-fashioned to younger scientists trying to make their mark in an increasingly competitive discipline. Nevertheless, Taylor did write in *A Study of Archeology*—along with his detracting comments—that Kidder was "the most influential exponent of the discipline active in the Western Hemisphere today."⁴⁰

AMONG HIS MANY CONTRIBUTIONS to archaeology, Kidder led the effort to communicate and synthesize knowledge being gathered by his geographically dispersed colleagues. At the time that he entered the Southwest, its archaeological community was a small, far-flung cadre of explorers, who knew each other at least by reputation, and usually were personally acquainted.

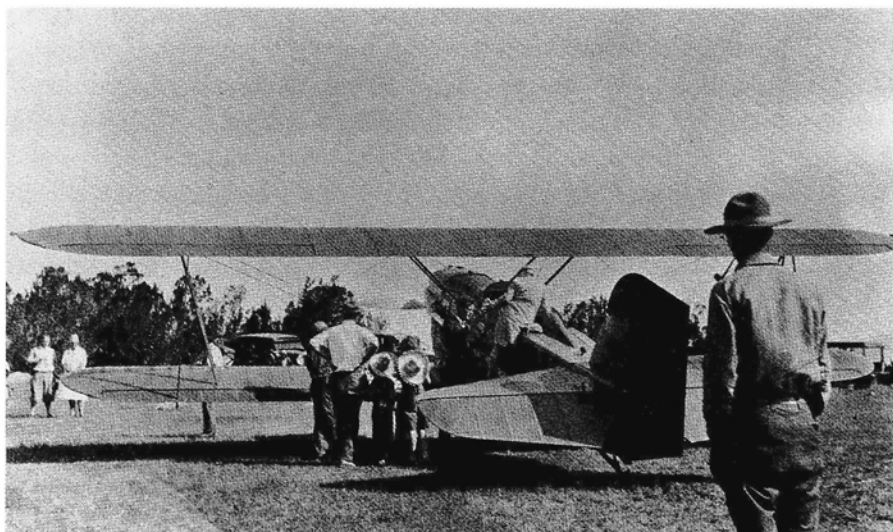
An informal get-together that took place at Pecos from August 29 to September 2, 1927, became an enduring tradition in Southwestern archaeology. At Kidder's invitation, some forty archaeologists from all over the Southwest gathered at the Pecos camp to talk about their discoveries, setbacks, puzzlements, and challenges. Among the participants were numerous contributors to pioneering archaeology in the Southwest, including Byron Cummings, Emil Haury, Earl Morris, Frank H. H. Roberts, Odd Halseth, Burton and Harriet Cosgrove, Harold Colton, Paul S. Martin, and E. B. Renaud. As Martin wrote, "It was an historic event—unique, informal, and greatly inspired and influenced by Kidder's guidance and leadership—qualities that were strong but not tyrannical. Kidder never insisted on his point of view although he freely gave of his profound experiences."⁴¹

The atmosphere of that first Pecos conference blended levity with intellectual intensity. Besides enjoying each other's company, and exchanging notes and anecdotes, the participants found time to create a major archaeological breakthrough, the so-called Pecos Classification, which defined the prehistoric cultural periods that are still widely used in Southwestern archaeology today.

The first Pecos Conference, 1927.



Charles Lindbergh landed at Pecos in 1929. Here, the Kidder children (in sombreros) gather around his plane.



The classification divided a thousand years of ancient human life into eight cultural periods, each with distinct characteristics. The periods were Basket-maker I, II, and III and Pueblo I, II, III, IV, and V, which referred to the prehistoric peoples called by early explorers "Basket People" and "Cliff Dwellers." (The Quadrangle at Pecos belonged to the last prehistoric period, called Pueblo IV.) The Pecos Classification may not have been the first effort to systematize archaeological knowledge, but it was the most comprehensive, usable, and enduring.

The archaeologists at the Pecos Conference also took note of a discovery in northeastern New Mexico in 1926 that extended the reach of their science much farther back in time than the early Basketmakers. Near Folsom, a cowboy named George McJunkins had come upon a prehistoric "kill site" left by ancient hunters. It contained ancient bison bones and uniquely shaped spearheads, or "projectile points." Later scientific investigation by the Denver Museum and by visiting scholars, including Kidder, confirmed that this site had been visited by human hunters probably about ten thousand years ago. The antiquity of humans in the Americas was established, and the Paleoindian period of prehistory was introduced to archaeologists.

In 1929, a second Pecos Conference was held, during which archaeologists glimpsed the technological future of the discipline when they viewed aerial photographs of Southwestern archaeological sites. The images were made at Kidder's suggestion by world-famous aviator Charles Lindbergh, who visited the Pecos site with his wife, Anne, that year. Lindbergh's work presaged coming decades in which aerial photography and, eventually, infrared remote sensing technology would provide detailed data on sites from the air.

It was not only aviators who brought news of scientific progress to those attending the second Pecos Conference. Dr. Andrew Ellicott (usually called “A. E.”) Douglass, an astronomer, discussed his monumental discovery in dendrochronology, or tree-ring dating. Using a find of prehistoric wood made near Show Low, Arizona, Douglass had joined an already known prehistoric sequence of tree-rings with the modern tree-ring continuum. This breakthrough marked the beginning of absolute, or chronologically precise, dating of ruins in the Southwest.

The discoveries reported at the 1929 conference left participants with a heady sense of achievement. But a few weeks later, the efflorescent period of hope and expansion in archaeology—and in the nation as a whole—came to an end, as financial disaster hit with the stock market crash. That year also marked the end of Kidder’s career in the Southwest. Kidder had signed on to work for the Carnegie Institution and moved to the East Coast. Though he devoted the remainder of his career to understanding the prehistoric Maya Indians and to administrative work at the Carnegie, toward the end of his life Kidder wrote that these pursuits had never replaced the prehistoric Indians of Pecos in his affections.