



# Waldo R. Wedel

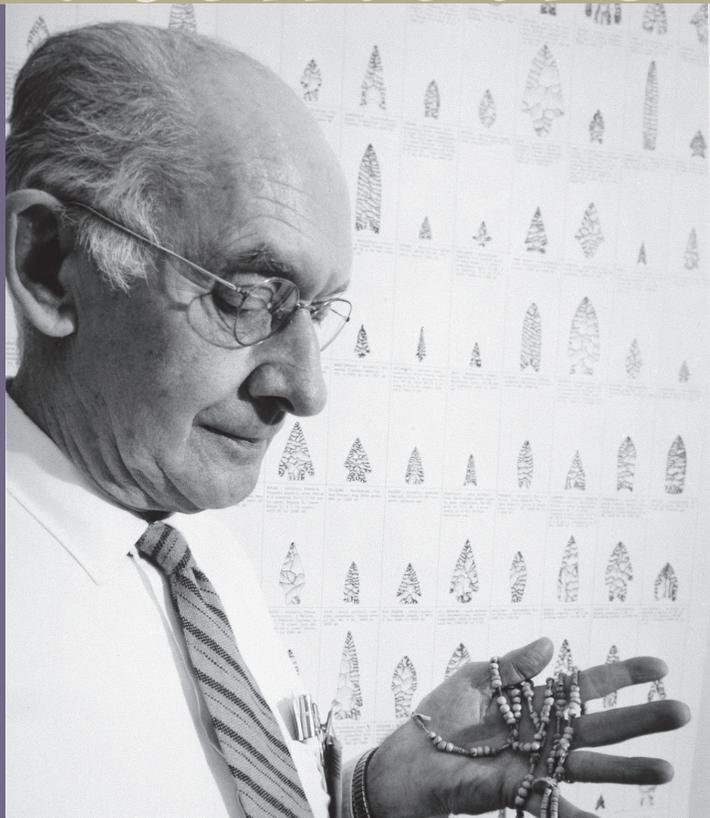
1908–1996

BIOGRAPHICAL

# *Memoirs*

*A Biographical Memoir by  
John O'Shea*

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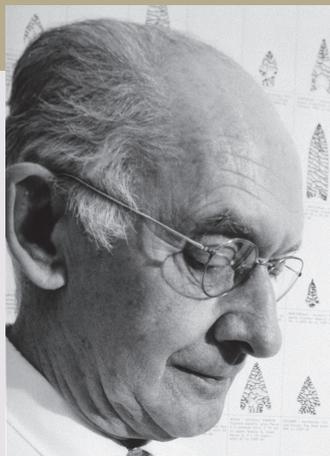
# WALDO RUDOLPH WEDEL

September 10, 1908–August 27, 1996

Elected to the NAS, 1965

Waldo Wedel, a preeminent scholar of North American Great Plains archaeology and ethnohistory, established the foundations of Plains archaeology as it is known today. He was an early advocate of environmental and ecological approaches to the study of the past and a vigorous proponent of the use of ethnographic evidence for understanding archaeological materials.

Wedel began his higher education at Bethel College in Kansas and earned his bachelor's degree in anthropology from the University of Arizona in 1930. He received a master's degree from the University of Nebraska in 1931 and a Ph.D. from the University of California-Berkeley in 1936. He then joined the staff of the Smithsonian Institution's National Museum of Natural History where, in increasingly responsible positions, he spent his entire professional career.



*Waldo R. Wedel*

By John O'Shea

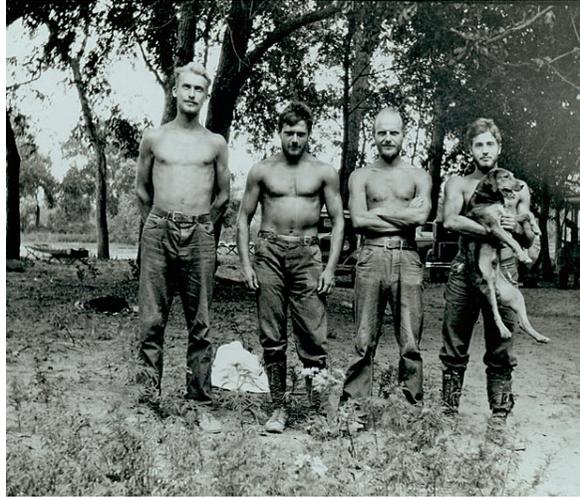
Smithsonian Institution Archives, Image #94-2865

Waldo Rudolph Wedel was born in 1908, the youngest of three children, in the small Mennonite town of Newton, Kansas. As a boy he hunted for prehistoric artifacts near his home on Sand Creek in the company of neighbor (and future NAS member), Emil Haury, who himself became a noted archaeologist of the Southwestern United States at the University of Arizona. Wedel credited his lifelong interest in archaeology and the Great Plains to these early days, and likewise his decision to pursue archaeology as a career (Wedel, 1977).

Wedel began his collegiate studies at Bethel College in North Newton, Kansas, but soon transferred to the University of Arizona to pursue formal training in anthropology. While at Arizona he attended a physiography—study of the surface features of the earth—class taught by the eminent American geographer and geologist William Morris Davis, who had recently retired from Harvard. Wedel credited Davis with kindling his interest in environmental approaches and their potential for informing the study of the past.

Upon earning his baccalaureate in 1930, Wedel continued his training in archaeology and anthropology at the University of Nebraska. It was here that he encountered William Duncan Strong, who would exert a decisive influence on his future research and career. Strong had recently been hired at Nebraska to teach anthropology and was in the process of establishing a statewide archaeological survey (Strong, 1935).

Wedel, though only 22 years of age, was about to midwife the birth of modern Plains archaeology. While at Nebraska he participated in the excavation of sites ranging in age from 10,000 years ago to the historic Pawnee. He would also gain experience with a variety of Plains environments, including localities such as Medicine Creek, the Republican River, and the Loup River, which are now synonymous with his research.



University of Nebraska Archaeological Field Party, 1930. Left to Right: Waldo Wedel, Michael K. O'Heeron, William Duncan Strong, and Frank Morrison (with dog).

(National Anthropological Archives, Smithsonian Institution [Item id NAA INV 0287 3500].)

### Pawnee Studies

Wedel's time in Lincoln also brought him into contact with Asa T. Hill. Hill was an avid avocational archaeologist who later became the director of the Museum and of Field Archaeology for the Nebraska State Historical Society. Hill's particular interest was the historic Pawnee and specifically with identifying the village where Zebulon Pike met the Pawnee in 1806. Toward this end Hill had conducted excavations at several historic Pawnee village sites and had personally purchased the site that is now generally accepted as the Pike village (the Hill Site, 25WT1). Hill's interest in Pike's expedition was matched by Wedel's own lifelong fascination with the ill-fated 1720 Villasur expedition from Santa Fe to the Pawnee villages—a Spanish military foray directed against growing French influence in the Great Plains. Through Hill's work Wedel became immersed in the archaeology and material culture of the historic Pawnee and their precontact progenitors.

The Pawnee figured prominently in Wedel's early work. Pawnee material culture was the focus of his master's thesis at the University of Nebraska, which, with some modification and additions, was published by the Bureau of American Ethnology as *An Introduction to Pawnee Archeology* (Wedel, 1936). This remarkable work seamlessly draws together Pawnee history and geography with archaeological survey, excavation, and material culture studies. Drawing on Strong's Direct Historical Approach, Wedel used the comparison of material culture recovered from known historic Pawnee sites with early contact sites on the Loup River to demonstrate the continuity between the two (Wedel, 1938). This connection is now universally accepted (O'Shea, 1989). Wedel was less certain of Strong's more distant linkage of the prehistoric Upper Republican settlements to the historic Pawnee (Gunnerson, 1982:21), a relationship not universally recognized today and that has become controversial in light of contemporary Pawnee repatriation claims.

In 1932 Wedel began doctoral research at the University of California-Berkeley under the direction of A. L. Kroeber. Although Berkeley had never awarded a Ph.D. specializing in archaeology, it was the institution where his mentor, W. D. Strong, had completed his undergraduate and graduate education. Wedel's early fieldwork at Berkeley was not all archaeological. He participated in an ethnographic field school among the Comanche of Oklahoma under the direction of noted University of Wisconsin anthropologist Ralph Linton. Wedel was assigned the task of studying Comanche material culture and in the process conducted what might now be termed ethnoarchaeology—that is, working with informants to understand the use and significance of material objects and remains. It is easy to see how this experience dovetailed with his application of the Direct Historical Approach to the Pawnee (Wedel, 1938), as he repeatedly identified matches between objects recovered from Pawnee excavations and objects in current use among the Comanche (Wedel, 1977:4). He later described the Direct Historic Approach and ethnographic analogy as offering “almost unlimited promise” for better understanding prehistoric remains (Wedel, 1977:8).

By this time Wedel had decided to investigate the effects of environmental variation on the prehistoric settlement of the Great Plains for his Ph.D. research. This was certainly a timely topic, as the region was then undergoing a horrific period of drought, crop failure, and soil loss that seemed to call the very habitability of the region into question. The topic was not an easy sell to his major professor. As Wedel related, Kroeber informed him that he was on the wrong track and that “...the causes of cultural phenomena are other cultural phenomena” (1977:6). Fortunately, the chairman of the Geography Department

at Berkeley, Carl Sauer, was interested; he was intrigued by the problem and by Wedel's extensive knowledge of prehistoric Plains occupations that were not widely known at the time. Through Sauer, Wedel was exposed to the principles of human ecology, whose relevance to his research was immediately apparent. In 1936 Wedel completed his dissertation, *Some Historical and Ethnic Aspects of Nebraska Archeology*, earning the first doctorate in anthropology with a specialization in archaeology ever awarded at Berkeley (Wedel, 1977:4).

Following the completion of his doctorate, Wedel returned briefly to the Nebraska State Historical Society and then, in August 1936, he was appointed assistant curator of archaeology for the Smithsonian Institution's National Museum of Natural History, Division of Archaeology. He was later promoted to curator (1950) and then head curator (1962). During his tenure at the Smithsonian he also served as the director of the Missouri Basin Project of the joint U.S. Park Service-Smithsonian River Basin Surveys between 1946 and 1949. He retired from the Natural History Museum in 1976 and continued on as emeritus curator until his death in 1996.

Over the course of his career Wedel held leadership positions in a number of professional organizations and received numerous awards acknowledging his contributions to research. He was president of the Society for American Archaeology in 1948-1949, of the Anthropological Society of Washington in 1951-1952, and of the Plains Anthropological Society from 1969 to 1971. He received Distinguished Service Awards in Biological Sciences from the Washington Academy of Sciences for his work on the human ecology of the Great Plains and for his contributions to American archaeology from the Society for American Archaeology in 1986. He was awarded three honorary D.Sc. degrees, in 1971 from Bethel College, in 1972 from the University of Nebraska, and in 1985 from Kansas State University. He also received the first Distinguished Service Award given by the Plains Anthropological Society, which was bestowed jointly on Waldo and his wife and colleague, Mildred (*Plains Anthropologist* 1992: 93-94).

### **Studying the Great Plains**

The interaction of climatic variability and settlement that interested Wedel from his earliest student days, carried through to an extraordinary extent for his entire career, as did his focus on the Great Plains. Yet his research experience was much more extensive, including work with Matthew Stirling at the Olmec site of La Venta in Mexico in 1943 (Drucker, 1952), directing University of California field crews in the excavation of shell mounds on the Sacramento River and Buena Vista Lake, and an investigation of Kansas

City Hopewell sites in northwest Missouri. While he made occasional forays into these other regions, the Great Plains remained his focus and passion.

A major influence on Wedel's research perspective was undoubtedly his marriage in 1939 to the ethnohistorian Mildred (née Mott) Wedel. Mildred received an M.A. from the University of Chicago under the supervision of Fay-Cooper Cole, founder of the university's Anthropology Department, in 1938. Her thesis, titled *The Relation of Historic Indian Tribes to Archaeological Manifestations in Iowa*, employed the Direct Historical Approach to link the historic Ioway and Oto tribes to the Oneota archaeological tradition in Iowa and surrounding states. Together, the Wedels controlled the archaeology and ethnohistory for the two major language groups that occupied the Central Plains—Waldo, the Plains Caddoans (Pawnee, Arikara, and Wichita) and Mildred, the Plains Siouans (Ioway, Oto, Missouriia, and later the Omaha/Ponca).

The Wedels were true intellectual partners whose respective disciplinary interests were complementary and mutually supporting. They were a formidable team: of the two, Mildred often seemed the more outspoken and opinionated, yet there was a sense that when she spoke she was giving voice to shared opinions. Of course, this was also a time when women still had very clearly defined—and limited—roles, regardless of their accomplishments. David Gradwohl describes visiting Wedel's Smithsonian Institution field camp at the Cheyenne River site (39ST1) in South Dakota in 1955 and of meeting the archaeologist-ethnohistorian "Mrs. Wedel," who, in addition to assisting in the excavation, was the lab manager, the cook for the whole crew, and the minder of hers and Waldo's three young children (Waldo M., Linda, and Frank) (Gradwohl, 1995:402; 1997).

In this same era, on a hill overlooking the Missouri River in northeast Nebraska, the accomplished Broadway dancer Flavia Waters Champe was living in a travel trailer and sieving beads from soils excavated by her husband, John L. Champe, at the Big Village site of the Omaha (Waters Champe, 1992). There clearly were some very extraordinary women at work in the early days of Plains archaeology.

To fully appreciate the intellectual accomplishments and contributions of Waldo Wedel, it is necessary to return to his starting point, when he began work in Nebraska with William Duncan Strong. The prevailing attitude at the time was that the entire region, once widely known as the "Great American Desert, had been devoid of human occupation until the arrival of the horse, which gave rise to the bison hunting cultures of the

historic era. The great droughts of the 1930s, which initiated the Dust Bowl-era farming failures, tended to reinforce this belief.

As archaeologists began seeking and discovering sites, they had no direct way to determine their age; dendrochronology had not yet been extended to the Plains and radiocarbon dating, the mainstay of modern archaeological chronology, was still several decades and a world war away. This left two main avenues toward constructing a culture-chronological sequence for these newly discovered sites. The first was the discovery of deeply stratified sites, where a chronological sequence could be developed via study of superimposed cultural layers and assemblages. Sites such as Signal Butte (Strong, 1935) and Ash Hollow Cave (Champe, 1946), both in Nebraska, provided such sequences but were located in the far west and were of little help for establishing the chronology of the more numerous shorter-lived sites that dominated the central and eastern portions of the Plains. This left the Direct Historical Approach, which took as its starting point the material culture of historically known groups and then sought similar archaeological assemblages among sites that were absent from the historic documents (proto-historic) or that lacked Euro-American materials (prehistoric). Assuming that material culture does not change radically, researchers expected that similarity with the historic assemblages would gradually decrease as one moved further back in time. Assemblages that were very dissimilar to the historically known materials were therefore either very far removed in time, or represented a distinct cultural tradition.

Perhaps also due to his early training in geography, Wedel, more than any other archaeologist working on the Plains, was interested in documenting the spatial distribution of sites, and in using these settlement patterns to understand the ecology and economy of the prehistoric inhabitants. His early training in cultural geography gave him a unique perspective, one that did not become prevalent in Plains archaeology until the widespread use of Geographic Information Systems (GIS)—a computerized method of assembling, validating, and then simultaneously displaying different kinds of information on one map. While studies of settlement patterns and distribution maps were a mainstay of Old World archaeology, they were much less common in North America. This situation began to change with the publication of Gordon Willey's landmark volume, *Prehistoric Settlement Patterns in the New World* (1956), to which Wedel contributed a chapter on changing settlement patterns on the Great Plains (Wedel, 1956). Wedel's emphasis on the importance of settlement patterns would be a common theme in the research and publications of the Missouri Basin Project during and after his tenure as director.

Armed with these simple tools Wedel established the foundations of modern Plains archaeology. He was fortunate to enter the scene when he did, and to be able literally to “write the book” on the archaeology of the region. In fact he wrote several foundational books, including *An Introduction to Kansas Archeology* (1959), *Prehistoric Man on the Great Plains* (1961), and *Central Plains Prehistory: Holocene Environments and Culture Change in the Republican River Basin* (1986). Yet unlike many archaeologists then and now who see chronology as the ultimate goal of their research, Wedel was not particularly interested in chronology, or even culture history, in its own right. His abiding interest was in the ways in which human culture and environmental variation were inextricably linked. His work predated, and anticipated, that of more theoretically inclined anthropologists such as Julian Steward. While Wedel applied models of human geography and ecology in his work, his goal was not to create general theories of cultural ecology or change, but rather to document in detail a particular case, in this instance the Great Plains, that might contribute to a more general understanding of these broader ecological processes. While his focus never wavered from the Great Plains, there is no question that he believed the results were generalizable.

His seminal paper *Environment and Native Subsistence Economies in the Central Great Plains* (Wedel, 1941) makes this abundantly clear. In this paper he relates the then-recent droughts on the Great Plains to the impact that similar climatic events had had on prehistoric settlement in different micro-regions of the Plains, and examines how the introduction of differing technologies, such as agriculture and the horse, affected the way in which human populations could adapt or respond to adverse climatic events. While the evolutionary anthropologists of the 1950s were eager to separate themselves from environmental determinism, Wedel in this paper was compelled to argue *for* the shaping role of environment and against historical determinism.

The final sentence of this paper brings home both the pragmatic and generalizable aspects of the research he presented: “Nevertheless,” he wrote, “it begins to look as though alternate settlement and abandonment was true of primitive man’s occupation of the western plains just as it has characterized the subsequent white man’s tenure where large-scaled government aid was not forthcoming during periods of adverse climatic conditions” (Wedel, 1941:28).

### **The Missouri Basin Project**

A less well-known but equally important contribution Waldo Wedel made to the development of North American archaeology was his critical role as the first director

Where Waldo would listen tolerantly, Mildred demanded that you prove you'd done your homework, and this treatment was by no means limited to students.

of the Missouri Basin Project. Following the end of World War II, the federal government began major dam-building programs that promised to flood large stretches of the nation's great river floodplains (Banks and Czaplicki, 2014). Such construction and flooding were destined to destroy a vast number of historic and prehistoric sites and gave rise to the concept of "salvage" archaeology (Thiessen, 1999). To address this threat, numerous

federal agencies and local universities formed partnerships to recover information on these sites before they were destroyed or submerged. The best known of these partnerships was the *River Basin Surveys*, a program established by the Smithsonian Institution in partnership with the National Park Service. The largest of the River Basin Surveys field programs was the *Missouri Basin Project*. More than 100 dam projects were anticipated for the Missouri River Basin, which covered North and South Dakota, Nebraska, Colorado, Wyoming, Montana, and Kansas. Not only was this a vast area, but some of the dam projects were incredibly large, such as the Oahe Reservoir, which ultimately flooded some 600 square miles of Missouri River bottomland in South and North Dakota (Thiessen, 1999).

Wedel was an influential figure in the creation of the River Basin Surveys and in 1946 was appointed the first director of the Missouri Basin Project. In July of that year he traveled to Lincoln, Nebraska, to establish the logistical base for the immense project and within the month had hired five archaeologists. By August, field investigations were underway. Wedel continued as the director through December 1949. During this time he established the pattern for how salvage efforts would be conducted and prioritized within the vast region, and he forged an important partnership with the University of Nebraska's Laboratory of Anthropology. He left the project to become curator of archaeology at the Smithsonian Institution in 1949 but continued to be interested in the Middle Missouri region and conducted archaeological excavation at the Cheyenne River site (39ST1) during 1955 and 1956. He also continued to be a public advocate for the value and necessity of salvage archaeology (Wedel, 1967).

Wedel's career epitomized an older model of archaeological research, when investigators were based in museums rather than in universities. He spent his entire professional career as a curator at the Smithsonian and never held the post of professor. This provided him clear advantages in terms of his own research and publication efforts and enabled him to participate in major archaeological undertakings, such as the Missouri Basin Project.

It also meant that he did not directly train students, at least in an academic setting, and that his impact and scientific legacy rode on his published research rather than on his mentoring of students. Fortunately, the small and informal character of the annual Plains Anthropological Conference provided him a setting where both students and colleagues could interact closely. Wedel was particularly gracious and accessible to students. I can recall an avid student latching onto the sleeve of his sports coat—literally button holing him—at one Plains Conference. Mildred Wedel seemed more formidable and less tolerant of uninformed opinions but she was an equally rich source of knowledge and insight for inquiring scholars. Where Waldo would listen tolerantly, Mildred demanded that you prove you'd done your homework, and this treatment was by no means limited to students.

### **The *Two House Sites* controversy**

Both Waldo and Mildred demanded a rigorous and critical assessment of data and explanations within their respective disciplines. This meant meticulously accounting for past research, knowing the sources, and even retranslating manuscripts and revisiting collections when necessary. This ethos of rigor and thoroughness was fundamentally affronted in 1969 by the publication of *Plains Anthropologist* Memoir # 6, *Two House Sites in the Central Plains: An Experiment in Archaeology*. David Gradwohl related that he had never seen Wedel so angry (Gradwohl, 2014), and his observation is borne out by two scathing reviews that Wedel published of the volume (Wedel 1970, 1971), with the former running 28 pages! While Wedel's autobiographical presentation on his education as a Plains archaeologist (1977) provides important insight into his world view and training, these reviews make clear what fundamentally mattered to him as a scholar and an archaeologist. The criticisms that repeatedly surface in these reviews are the disrespect or disregard for prior research and the making of sweeping claims or generalizations without supporting evidence.

To place Wedel's reaction in perspective, the *Two House Sites in the Central Plains* volume was the product of an innovative graduate seminar taught by Raymond Wood at the University of Missouri, in which seminar participants took part in the excavation and the analysis of two Central Plains Tradition houses, one in eastern and the other in western Nebraska. The publication was among the first, and most publicized, application of the principles of the "New Archaeology" of the 1960s to Plains archaeology. It put forward new techniques of archaeological recovery and analysis that were to revolutionize the understanding of the Central Plains Tradition and, by implication, render obsolete all that had gone before. The fieldwork was conducted in August of 1967 and the chapters

of the memoir were generated in a seminar during the subsequent two semesters. It was a very rapid sequence from excavation to analysis to publication, as Wedel noted (1970:226).

Looking at this volume today, it hardly seems revolutionary or even particularly controversial, but to the man who more than anyone else had established Central Plains archaeology, it was a challenge that could not be ignored. For many at that time, the controversy was not about the analysis of two archaeological sites, but the conflict between traditional archaeology and the New Archaeology. The general reaction to the publication was such that a session of the 1970 Plains Anthropological Conference in Tulsa, Oklahoma, was devoted to the volume and its critique. Dale Henning, who chaired the session (Henning, 2014), noted that:

*The student participants of the seminar, most of which were in the room, received a memorable and grim lesson in proper archaeological excavation, analysis, interpretation, reporting and scholarship from the most-respected Plains archaeologist of the time ....[Wedel's] delivery at the session was given in a clear, low tone. He did not appear angry or upset, just matter-of-fact as always. I had heard him speak many times, sometimes with positive suggestions, occasionally with a bit of negative humor, but never so acerbic as he was at this event. But...he backed what he said in his reviews fully, carefully, and reasonably, which was characteristic of the man.*

Wedel's critique of the work, both in writing and in the Plains Conference session, was not polemic and was not concerned with grand theory or the clash of traditional versus the New Archaeology. Instead he focused on data and interpretation, and particularly on what the research effort might have produced if it had incorporated records and artifact collections from previous excavations, such as the numerous sites from the nearby Medicine Creek locality.

On rereading the long written critique, it becomes clear to me that Wedel's second motive was to protect the integrity of the written archaeological record. Wedel believed in normal science. He believed in the steady progress of knowledge and that the continuous accumulation of new data would ensure that an ever more accurate understanding of the prehistoric past would be attained. This is why in his review he felt compelled to publish site distribution maps and air photos of the Medicine Creek sites, and to provide detailed correctives concerning everything from house construction to the seasonal distribution of

migratory birds. The *Two House Sites* memoir was not simply a case of graduate students trying out new methods and techniques of analysis; it was the most recent statement on Central Plains archaeology, and it appeared in the flagship journal of Plains archaeology. As such, its serious deficiencies and inaccuracies had to be addressed and corrected.

The irony is that Wedel's criticisms reflected the very scientific paradigm that the New Archaeologists aspired to. He demanded adequate sampling, he demanded demonstrations of formal and statistical significance, and he demanded that assertions be tested against evidence. These were exactly the qualities that underpinned his own research. He identified distinctive lines of environmental and cultural evidence and demanded that each be treated with rigor and understanding. This was the legitimate basis on which inferences about the past could be offered, and they were offered with the expectation that they would be tested and refined by new data in the future.

Waldo Wedel lived in a unique time, not so far removed from the untamed West and yet firmly in the world of modern research. When he was a student, his primary Comanche informant, Howard White Wolf, could personally remember Ranald S. Mackenzie's U.S. Cavalry attack on his village at Palo Duro Canyon in 1874. Yet Wedel remained active into the age of carbon dating, digitized manuscripts, and satellite imagery. His career similarly spanned eras within American archaeology—from initial exploration, through the first efforts at systemization, the advent of absolute dating, and finally into the age of big data and big theories. Yet his steady gaze on the Plains was unwavering. It is clear that he took to heart the admonition he received from his mentor Carl Sauer at Berkeley (one that he quoted in his essay on the training of a Plains archaeologist):

*Such work obviously cannot be done by sample studies ranging widely, but may require a lifetime given to learning one major context of nature... The human geographer cannot be a world tourist, moving from people to people and land to land, and knowing only casually and doubtfully related things about any of them (Wedel, 1977:7).*

Waldo Wedel was not a "tourist." His final major work, *Central Plains Prehistory: Holocene Environments and Culture Change in the Republican River Basin*, was published in 1986 and considered the same themes that had fascinated him fifty years earlier as a young man studying anthropology at the University of Nebraska. The theoretical formulations that Wedel's work anticipated have come, and gone, and come again, but the solid edifice of his patient and persistent research continues to be the foundation on which modern Plains archaeology is grounded.

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