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From a Tabula Rasa to the Governor's Award for Historic Preservation

How the CHAPS Program brought Archaeology to Deep South Texas

Roseann Bacha-Garza, Juan L. González, Christopher L. Miller, and Russell K. Skowronek

ABSTRACT: Prior to 2009, South Texas was essentially an archaeological tabula rasa, largely unknown in the academic, public, or grey literature due to its location far from research universities, the state historic preservation office, and cultural resource management firms. Here, we relate how a consortium of anthropologists and archaeologists, biologists, historians, geologists, and geoarchaeologists have embraced a locally focused, place-based STEAM research approach to tell the story of a largely unknown region of the United States and make it accessible to K-17 educators, the public, and scholars with bilingual maps, books, exhibits, films, traveling trunks, and scholarly publications. The efforts of the Community Historical Archaeology Project with Schools Program at the University of Texas Rio Grande Valley have been recognized locally, nationally, and internationally.

KEY WORDS: STEAM, South Texas, CHAPS Program, public history, archaeology

Introduction

The decades following the 1994 passage of the North American Free Trade Agreement (NAFTA) resulted in significant economic development activities in the communities of the region in Texas adjacent to the Rio Grande border with Mexico. Orchards and irrigated agricultural fields were rapidly replaced with housing and businesses. These private construction activities destroyed aspects of the region's heritage without comment. Recognizing that the region was transforming rapidly, the Community Historical Archaeology Project with Schools (CHAPS) Program set a course that embraced community engagement and K–17 education based on scholarly research. Simply, the goal was to create knowledge that would illuminate and give voice to local cultural and natural history, making it the basis for educational enhancement and community pride. This in turn would contribute to issues

r We refer to our educational audience as K-17 to indicate that we work actively with elementary, middle school, high school, undergraduate, and graduate students.

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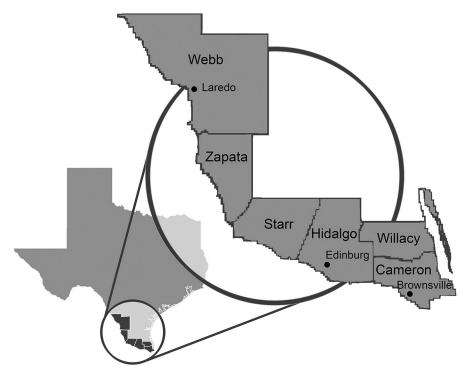


Figure 1. Counties served by the CHAPS Program at UTGRV.

pertaining to livability and quality of life for residents and a source of sustainable community growth through eco- and public heritage tourism. With this approach, every project would have implications for regional research, K–17 education, and community engagement.

Public Archaeology in Context

Over the last several decades, the meaning of "public archaeology" has broadened considerably. The 1966 passage of the National Historic Preservation Act led to an explosion of careers in cultural resource management (CRM) for individuals with backgrounds in the social sciences. Because this work was funded by public resources and tied to compliance relating to heritage management, it was by its nature very specific and applied. It was in this milieu that "public archaeology" was born. A quarter of a century later, the definition of public archaeology expanded to include activities that engaged the public in archaeology through lectures, tours, and excavations. Around that time, some universities that had embraced CRM archaeology as a means of funding graduate students and promote locally focused research began to actually engage the broader public directly. One example is a joint program of Montana State University and the Bureau of Land Management called Project Archaeology, now a national program focused on making

archaeology accessible to 3rd-12th-grade students and teachers.² This project has served as a model for other university-government partnerships.³

Today, some organizations such as the Society for Historical Archaeology's Public Education and Information Committee advocate education at outreach events, including excavation site tours, lectures, or hands-on activities, but note that "public archaeologists must strike a balance between educating the public while maintaining professional standards for research, excavation, and preservation." The Society for American Archaeology website's "Education & Outreach" section goes beyond this sort of simple "show-and-tell" approach for the public to advocate for a broader, more systematic educational introduction to archaeology, its techniques, and how it contributes to the knowledge of the past. The Florida Public Archaeology Network (FPAN) of state funded facilities promoting the conservation and stewardship of archaeological resources and public understanding of Florida's archeological past offers an example of this more integrated approach.

If there is one takeaway from the trailblazers in this endeavor, it is that there is no single template available for bringing archaeology to the broader public, as it is intimately entwined with public heritage, history, and community engagement and situated within a politically and locally focused geographical region. Additionally, although there is no doubt that every region has a rich archaeological and historical past, in some areas educators and local residents might overlook their own region's significance. Basically, Gertrude Stein's bromide "there is no there there" often is the operative paradigm. The Rio Grande Valley of southeastern Texas was one such region.

Tabula Rasa in the Rio Grande Valley

Archaeology has been part of the American experience for more than 180 years.⁷ Today, more than one hundred universities in the United States offer courses in archaeology and, since 1966, every state has had a historic preservation office where archaeological sites are recorded. As a result of this, it is rare in the United States today to find a region that could be described as an archeological tabula rasa, especially when it is home to multiple universities, but deep South Texas between

- 2 Project Archaeology, "Discover the Past—Shape the Future," https://projectarchaeology.org/.
- 3 UTSA Center for Archaeological Research, "Legacy: Hands on the Past," 2022, http://car.utsa.edu/CARLegacy/Legacy.html; Texas Historical Commission, "Texas Archaeological Stewards," https://www.thc.texas.gov/preserve/projects-and-programs/texas-archeological-stewards.
- 4 Society for Historical Archaeology, "Public Education and Information Committee," https://sha.org/committees/public-education-and-information-committee/.
- 5 Society for American Archaeology, "Education & Outreach," https://www.saa.org/education-outreach.
- 6 William B. Lees, Della A. Scott-Ireton, and Sarah E. Miller, "Lessons Learned Along the Way: The Florida Public Archaeology Network after Ten Years," *Public Archaeology* 14, no. 2 (2015): 92–114.
- 7 Gordon R. Willey and Jeremy A. Sabloff, *A History of American Archaeology*, 3rd ed. (New York: W. H. Freeman and Co., 1993).

the Nueces River and the Rio Grande was an exception. At the time the CHAPS program was begun, only three universities south of the Nueces River—Texas A&M Kingsville, the University of Texas Brownsville (UTB), and the University of Texas Pan American (UTPA)—had programs in anthropology and only UTPA taught archaeology. But it must be noted that those teaching at UTPA were active only in field research outside the United States. Although some efforts were undertaken to preserve borderlands history, there was no institutional mechanism for sustaining those efforts.⁸

In 2005, Russell Skowronek, then a professor at a university located in the San Francisco Bay Area, took a sabbatical leave at UTPA. In California, he had heard the lament of lifelong residents (including Native peoples) of the loss of archaeological and historic sites during the transition from the "Valley of Hearts Delight" to "Silicon Valley" in the last third of the twentieth century. UTPA's Dean of the College of Social and Behavioral Sciences at the time, Van Reidhead, himself an anthropologist and former archaeologist by training, asked Skowronek to ascertain the state of archaeological knowledge in the region. An examination of the published archaeological literature found little beyond regional archaeological syntheses, cultural resource reports, dissertations from the University of Texas Austin, some work by avocational archaeologists, and ethnohistories. A call to colleagues working in Texas regarding historical archaeology in this region showed that apart from a single dissertation, there was little material on the region south of San Antonio beyond archaeological surveys at the Mexican-American War and Civil War battle sites of Palo Alto and Palmito Ranch.¹⁰ Four years later, Reidhead found funding to establish a public-oriented program for archaeology and history and he recruited Skowronek to build it.

In July of 2009, the CHAPS program was announced at a meeting of Los Porciones Genealogical Society in Edinburg, Texas. There, the founders proposed that the CHAPS Program work with the community and across disciplinary lines to reveal the story of the broader region from prehistory to present. In attendance

⁸ Mario L. Sánchez et al., A Shared Experience: The History, Architecture, and Historic Designations of the Lower Rio Grande Heritage Corridor (Austin: Los Caminos del Rio Heritage Project and the Texas Historical Commission, 1994).

⁹ Thomas R. Hester, *Digging into South Texas Prehistory: A Guide for Amateur Archaeologists* (San Antonio, TX: Corona Publishing Company, 1980); Robert J. Mallouf et al., "A Predictive Assessment of Cultural Resources in Hidalgo and Willacy Counties, Texas," Archeological Survey Report 23, Texas Historical Commission, Austin, 1977; Tiffiney Tierneny, "Re-Evaluation of Late Prehistoric and Archaic Chronology in the Rio Grande Delta of Texas" (PhD diss., University of Texas, Austin, 2005); Donald Kumpe and Michael Kryzwonski, "El Sauz Chert: A Distinctive Lithic Resource on the Lower Rio Grande," *La Tierra* 36 (2009): 33–39; T. N. Campbell, "Coahuiltecans and Their Neighbors," in *Handbook of North American Indians, Southwest*, ed. Alfonso Ortiz, vol. 10 (Washington, DC: Smithsonian Institution, 1983): 343–58; Martin Salinas, *Indians of the Rio Grande Delta* (Austin: University of Texas Press, 1990).

¹⁰ Mary Jo Galindo, "Con un Pie en Cada Lado: Ethnicities and the Archaeology of Spanish Colonial Ranching Communities Along the Lower Rio Grande Valley" (PhD diss., University of Texas, Austin, 2003).

were families deeply committed to the history of their region. One retired educator, Lucas Hinojosa, made the hopeful and fateful statement, "What took you so long? We have been waiting for you!" With those words, the CHAPS Program had its marching orders. The game was on.

Creating the CHAPS Program

With thirty-six years of field experience in prehistoric and historical archaeology, graduate degrees in both anthropology and history, and the experience of building a research lab with a community outreach component, Skowronek was jointly appointed to the anthropology and history programs at UTPA. At the campus, there was no archaeology lab or space to create one. The CHAPS Program began out of a faculty office. During the new faculty orientation, he met Juan González, a new geology professor, who observed that the geology of the Nueces Strip was similarly unknown.

Recognizing that the region was transforming rapidly, the CHAPS Program set a course that embraced community engagement and K–17 education based on scholarly research. Simply, the goal was to create knowledge that would illuminate and give voice to local cultural and natural history, making it the basis for educational enhancement and community pride. This in turn would contribute to issues pertaining to livability and quality of life for residents and a source of sustainable community growth through eco- and public heritage tourism. With this approach, every project would have implications for regional research, K–17 education, and community engagement.

Over the first year, a broad spectrum of faculty interested in conducting local research began to join the CHAPS Program team. They would ultimately hail from anthropology, biology, business, communication, geology, history, library special collections, psychology, and public administration. With the CHAPS Program as an umbrella, these interdisciplinary collaborations were able to reach across the historical sciences and the humanities and not only provide credence and cover for their respective research, but also to begin breaking down the traditional "gown versus town" schism through increased community engagement.

It was immediately apparent that the lack of infrastructure and institutional and community support meant that, to have any chance at success, the CHAPS Program would need to find ways to reach beyond the confines of a university classroom. Armed with two course releases and a single graduate assistant, the program sought low-cost ways to enter the public sphere. These included lectures to K-12 schools, local museums, and trailer parks of "Winter Texans," aka "Snowbirds," who made the region their home during the winter. The program participated in the annual archaeology fair hosted by the National Park Service at Palo Alto Battlefield National Historical Park and the semiannual Nde Daa Lipan Apache Tribe of Texas Pow Wow. Program team members began talking with farmers and

collectors. To this day, there are no full-time CHAPS Program staff. Funding for faculty, staff, and students (both undergraduate and graduate) comes from grants, donations, and the College of Liberal Arts.

In 2015, UTPA merged with UTB to form University of Texas Rio Grande Valley (UTRGV). UTRGV embraces four "core principals": "Health and Medical Education," "Educational Opportunities," "Research Impacting the Rio Grande Valley & Beyond," and "Community Engagement." The CHAPS Program engaged in three of the four priorities. Additionally, the CHAPS Program, with its broad approach, played a central role in UTRGV being named a Carnegie Engaged University in January of 2020.

Audiences and Methodological Approaches

The Rio Grande Valley is situated at the southern tip of Texas and is one of the fastest growing areas in the nation. Located some 250 miles south of San Antonio, Texas, the Rio Grande Valley truly lies at the end of the road in the United States, and also serves as the gateway to Latin America. Commercial agriculture and ranching dominated the Rio Grande Valley until the 1990s. Today, it is rapidly transforming into one of the main entrepôts into the United States for manufactured and agricultural goods from Latin America in the wake of the passage of NAFTA. It is a land of contrasts and extremes in wealth, education, infrastructure, and housing.

A mix of Native peoples, Spaniards, *mestizos*, and mulattos comprised the eighteenth-century residents of the region south of the Nueces River to the Rio Grande. The 1836 southern border of the independent Republic of Texas was the Nueces River. It was only with the addition of Texas to the United States in 1846 and the subsequent Mexican–American War that the Rio Grande became in 1848 the geopolitical boundary set between the United States and Mexico. This was a porous border, however; the flow of culture, ideas, and peoples continues into the twenty-first century. Because of this rich history and its proximity to Mexico, the predominately Hispanic population varies with regard to generational status such that some individuals have resided in the area for mere days while other families have resided in the area for multiple generations.

CHAPS's area of operation is comprised of six counties: Cameron, Hidalgo, Starr, Willacy, Zapata, and Webb, which share similar characteristics in terms of race, poverty, and income. Specifically, the population is predominately Hispanic and low-income. For example, Hidalgo County is 92.5 percent Hispanic and, according to the 2020 census, the median income for a household in the county

II Christopher L. Miller, "Prelude: From the Seno Mexicano Frontier to the Nueces Strip Borderland," in *The Civil War on the Rio Grande*, 1846–1876, ed. Roseann Bacha-Garza, Christopher L. Miller, and Russell K. Skowronek (College Station: Texas A&M University Press, 2019); David Montejano, *Anglos and Mexicans in the Making of Texas*, 1836–1986 (Austin: University of Texas Press, 1994).

was \$40,014, making it one of the poorest counties in the nation. This is approximately \$21,000 below that of the Texas median. Further, the rate of persons below the poverty level was 26.9 percent, compared to 13.6 percent statewide, and only 65.7 percent of persons over twenty-five years of age had graduated from high school, whereas in Texas 83.7 percent had done so. These economic data were important in the formulation of outreach and educational endeavors relating to public archaeology. Unlike in other regions, in our area schools lacked funds to pay for lectures. "Winter Texans" lived on fixed incomes in an area where the cost of living was low. Both groups wanted information about the Rio Grande Valley but funding this would require grants.

Importance of Culturally and Locally Relevant Curriculum

The CHAPS Program offers a culturally appropriate means for educating the largely Hispanic population of the Rio Grande Valley. 12 The cognitive science literature highlights the importance of integrating culturally and locally relevant curriculum into quality math education. For example, researchers have noted that an individual's ability to learn and understand new concepts is dependent on that person's ability to "make the connections to their existing knowledge." These include cultural and locally relevant experiences, and therefore, it may be beneficial for concepts to be tied to students' cultural experiences.¹⁴ Utilizing place- and community-based learning models, we enable students from the region to connect learning to recognizable materials and create memorable lessons that in turn build a sense of community pride. As Peter Block observed, "nothing will get better in a community without a deeper sense of connectedness and social fabric in the community."15 Studies have shown that university students who switched majors from engineering/science majors to social sciences/humanities frequently did so because they perceived that course content in humanities and social sciences allowed them to explore their ethnicities and integrate them with their education.¹⁶ Taken together, this research suggests that it is important to include a culturally relevant context into the curriculum. CHAPS innovative, interdisciplinary approach supports Hispanic students' mastery of some of the technical skills associated with the STEAM fields of archeology, anthropology, biology, geology, and history. With support from the National Endowment for the Humanities (NEH), in

¹² Velma D. Menchaca, "Providing a Culturally Relevant Curriculum for Hispanic Children," *Multicultural Education* 8, no. 3 (2001): 18–20.

¹³ Eric Gustine et al., "Culturally Relevant Mathematics Teaching in a Mexican American Context," *Journal of Research in Mathematics Education* 28, no. 6 (December 1997): 711.

¹⁴ Gustine et al., "Culturally Relevant Mathematics Teaching"; Tyrone C. Howard, "Telling Their Side of the Story: African-American Students' Perceptions of Culturally Relevant Teaching," *Urban Review* 33, no. 2 (June 2001): 131–49.

¹⁵ Peter Block and International City/County Management Association, *Peter Block on Community: The Structure of Belonging* (Washington, DC: ICMA, 2009).

¹⁶ Moin Syed, "Developing an Integrated Self: Academic and Ethnic Identities Among Ethnically Diverse College Students," *Developmental Psychology* 46, no. 6 (2010): 1590–1604.

2012 the CHAPS Program was able to formalize place-based, locally focused education first with classroom visits and public lectures and later with teacher workshops.¹⁷ Since 2012, we have worked in concert with skilled and qualified K–12 educators of Hispanic and Native American descent to create locally focused curricula. This not only better connects educators with their students, but it also increases opportunities for cultural competency and historical literacy among regional populations. This further brings the classroom into households when students engage in discussion at home by conversing with relatives and neighbors.

K-12 Education and the Broader Community

Since 2009, the CHAPS Program has given more than 150 lectures to more than 15,000 K–12 students and members of the public on a myriad of topics familiar to public archaeologists, including, "What is Archaeology," "Careers in Archaeology," "Indians of Texas," "Indians of North America," "Oral History," "the American Civil War on the Rio Grande," "the Underground Railroad through South Texas," and "Ancient Landscapes of South Texas." The success of the 2012 NEH grant gave legitimacy to the CHAPS Program with regional foundations. With the support of the Houston Endowment, Humanities Texas, and the Summerfield G. Roberts, Summerlee, and Texas Historical Foundations, the CHAPS Program has held more than a dozen workshops for K–12 teachers on Native peoples of South Texas, ancient landscapes of South Texas, and the American Civil War in South Texas. Teachers not only participate but also contribute by penning lesson plans which meet the standards of the Texas Essential Knowledge and Skill or "TEKS" curriculum. The CHAPS Program works with the teachers, other professionals, and

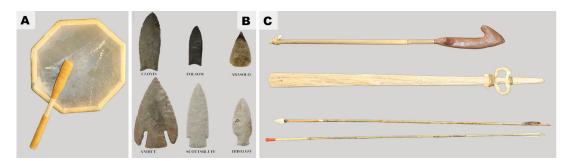


Figure 2. Native Peoples of South Texas Initiative, partial contents of the traveling trunk. A: Hand drum; B: Casts of projectile points; C: Replica atlatls and spears.

17 Edna C. Alfaro et al., From Porciones to Colonias, The Power of Place and Community-Based Learning in K-12 Education—A Case Study from the Lower Rio Grande Valley of Texas (Edinburg: The University of Texas—Pan American, 2014); Russell K. Skowronek et al., "Re-Discovering the Rio Grande Valley—The Community Historical Archaeology Project with Schools Program and Lifelong Education," in More Studies in Rio Grande Valley History, ed. Milo Kearney et al. (Brownsville: University of Texas at Brownsville, 2013), 169–89.

members of the Native American community to publish inclusive, locally focused lesson plans and develop supplemental materials for hands-on education. These have resulted in traveling trunks for K–12 education that are currently used in over twenty school districts within the Region One Educational Service Center (ESC), which runs from Laredo to Brownsville, the final two hundred miles of the Rio Grande.

One of the trunks focusing on the Native peoples of South Texas was developed with the support of the Lipan Apache Tribe of Texas. Tribal members not only contributed to a book but also made traditional hand drums and recorded traditional songs and music.¹⁸ This popular book included chapters on food, water, stone, and mineral resources, and an overview of local prehistory and ethnohistory. These trunks also included casts of locally found projectile points artifacts and a comprehensive poster of projectile points ("Projectile Point Types"). The poster had been updated from its original format of hand-drawn points to full-size photographs. Not only were the points identified, but the individuals who found them were honored by placing their names on the poster. Also included was a film illustrating flint knapping and the use and power associated with spear-throwers or *atlatls*. The trunks included a functional *atlatl* for demonstrations.

By 2015, what had been a largely forgotten corner of Texas was gaining recognition. In October of that year at the 86th annual Texas Archeological Society meeting, the CHAPS Program was honored with the Distinguished Service Award "For Outstanding Contributions of Service to Texas Archeology." Seven months later, in May of 2016, the Texas Historical Commission recognized the CHAPS Program with an Award of Merit for its efforts to preserve Texas's cultural and historic resources. The award acknowledges the quality, integrity, and impact of CHAPS Program work.

Complementary quotes such as "CHAPS has embraced history education across multiple disciplines—including archeology, preservation, anthropology and geology—cultivating and sharing the results of their work in a variety of mediums for the benefit of all in the community," and "CHAPS has served as a connector between preservation organizations and the community, facilitating education initiatives for students and teachers alike," indicate that the program was gaining recognition and making an impact in the region. Regional educators who participated in the professional development workshops were inspired to incorporate the learning tools in their classrooms. We built a loyal audience who were anxious to return the following years for subsequent workshops.

Shortly thereafter, the CHAPS Program undertook a broad regional initiative titled "the Rio Grande Valley Civil War Trail." Conceived during the observation

¹⁸ Bobbie L. Lovett et al., eds., *The Native American Peoples of South Texas* (Edinburg: University of Texas–Pan American, 2014).

¹⁹ Roseann Bacha-Garza, Christopher L. Miller, and Russell K. Skowronek, "Creating the Rio Grande Valley Civil War Trail," in *Extra Studies in Rio Grande Valley History*, ed. Milo Kearney et al. (Brownsville: University of Texas Rio Grande Valley, 2016), 457–78.

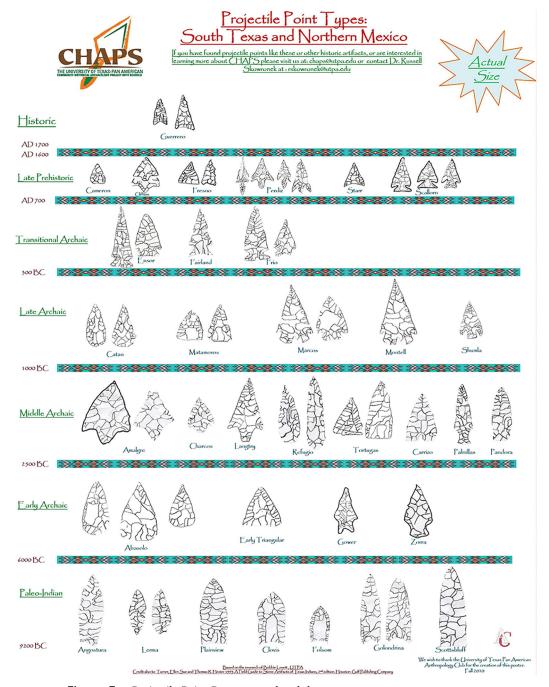


Figure 3. Projectile Point Poster, 2012, hand drawn.

of the sesquicentennial of the American Civil War, this initiative brought together scholars, community members, and museum professionals from Brownsville to Laredo, a two-hundred-mile portion of the Rio Grande. The project considered the

American Civil War alongside the concurrent Second French Intervention in Mexico—the French attempt to install Maximillian I as Emperor of Mexico involving their own soldiers with limited support from British, Austrian, French, Belgian, and some Mexican troops. The result was a bilingual map with associated podcasts and a traveling exhibition.²⁰ A traveling trunk included historically accurate uniforms and other accoutrements, films, posters, maps, lesson plans for K–16 educators and a brief "textbook" appropriate for middle-school and older students.²¹ These and other scholarly publications discussed the importance of battlefield archaeology

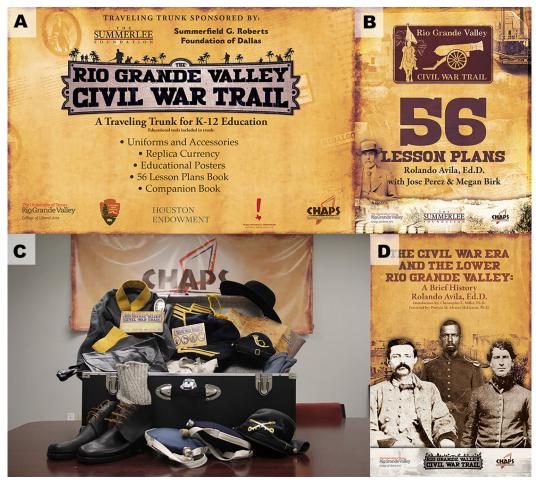


Figure 4. Rio Grande Valley Civil War Trail educational materials. A & C: Traveling Trunk; B: Lesson plan book; D: Textbook contains a section on protecting the archaeological record.

- 20 Russell K. Skowronek, Christopher L. Miller, and Roseann Bacha-Garza, War and Peace on the Rio Grande 1861–1867 (Edinburg: University of Texas Rio Grande Valley, 2020).
- 21 Rolando Avila, Jose Perez, and Megan Birk, 56 Lesson Plans, Rio Grande Valley Civil War Trail (Edinburg: University of Texas Rio Grande Valley, 2018); Rolando Avila, The Civil War Era and the Lower Rio Grande Valley: A Brief History (Edinburg: University of Texas Rio Grande Valley, 2018).

and the detrimental aspects of metal detecting and collecting on historic sites.²² For this initiative, the Texas Historical Commission honored the CHAPS Program on July 22, 2016, with the "Chairman's Award for Community Education for the Rio Grande Valley Civil War Trail." In total, forty traveling trunks for K–12 education have been distributed to and are currently in use at twenty-two of the thirty-two independent school districts between Laredo and Brownsville.

Family Farm Research

Recognizing that no one knows the land better than a farmer and that more archaeological sites are found by agriculturalists than archeologists, the CHAPS Program team realized the need to collect and preserve these families' knowledge of their land and their place in Rio Grande history. In the decades following World War I, the "Magic Valley" was flooded with farming families. In 1940, it would not have been unusual to hear English, Flemish, German, Polish, Spanish, and Swedish spoken on the streets of Edinburg, Texas. Three generations later, following the passage of NAFTA, land which once grew melons, cotton, and sorghum and vast orchards of Ruby Red grapefruit became home to housing subdivisions and light industry or were transformed into corporate farms.

To emphasize the interconnectedness of locally focused research, the CHAPS Program faculty developed the first interdisciplinary course approved for inclusion in the University's catalog, "Discovering the Rio Grande Valley: The Natural and Cultural History of South Texas," in 2011. It was designed as an interdisciplinary methods course in which students gain an understanding of the archeology, anthropology, biology, geology, and history of this dynamic borderland region. The course is taught through a combination of lectures and hands-on research focused on a plot of land and its current and previous occupants. It focuses on family farms that have functioned in the region for generations. This requires working with nonstudent community members bringing the rich stories of the valley to life. This rapid assessment generated findings by using land deeds and transactions, collecting oral histories, sifting through family archives of photographs and related historic documents, genealogy, maps, GIS software, and archaeological, biological, and geological surveys.

This information is compiled into a student-written published report which is given to participating family members and then deposited at the university and city libraries in the region (in a series called A *Porción* of Edinburg—Family Farm Studies). The collected oral histories paint a picture of how life has changed in the Rio Grande Valley over the past century. Additionally, these studies provide information on changing fauna and flora and geological features. Seven of the ten

²² Roseann Bacha-Garza, Christopher L. Miller, Russell K. Skowronek, eds., *The Civil War on the Rio Grande*, 1846–1876 (College Station: Texas A&M University Press, 2019); Christopher L. Miller, Russell K. Skowronek, and Roseann Bacha-Garza, *Blue and Gray on the Border: The Rio Grande Valley Civil War Trail* (College Station: Texas A&M University Press, 2018).



Figure 5. Field surveys of family farms provides information on near surface geology and archaeology.

studies identify prehistoric archaeological materials during the archaeological survey or during oral history interviews. For these efforts, the Texas Oral History Association awarded the CHAPS Program the 2020 Mary Faye Barnes Award for Excellence in Community History Projects in September 2021.



Figure 6. Community Engagement is research—CHAPS Program team working with the public and private collectors.

Public Archaeology, Projectile Points, and Pow Wows

While archaeological surveys such as those conducted in connection with the "Family Farm Studies" have identified some archaeological sites, others have been found through community outreach endeavors. We understand that farmers, ranchers, and hunters find evidence during their forays into the field. Reaching these individuals can be problematic, as many incorrectly fear their property will be confiscated.²³ We explain to them using materials provided by the Texas Historical Commission the importance of these discoveries and the fact that their location will remain confidential. To obtain this information we reach farmers, ranchers, and hunters through their children and grandchildren at pow wows and other public heritage events. Since 2010, the CHAPS Program has collaborated with the National Park Service staff at Palo Alto Battlefield National Historical Park on the annual "Archaeology Month" Rio Grande Delta International Archaeological Fair. This event brings the public to us.

In these settings, interactive hands-on activities focused on prehistoric and historic archaeology, oral history, and genealogy allow people to literally touch the past, test their skills of observation, and think about their family and the past. One of the activities developed by the CHAPS Program faculty was a chronologically ordered, full-scale chart of projectile points from the region. We invite visitors to handle actual points and we challenge them to match these artifacts against the chart to learn the age of the points in their hands. For many, a three-thousand-year-old

^{23 &}quot;A Property Owners Guide to Archaeological Sites," (Austin: Texas Historical Commission Archaeology Division, n.d.).

point will be the oldest human-made object they have ever held. It will spark their sense of discovery and perhaps help them remember a forgotten box of artifacts from their grandparent's property. Many ask to bring in their artifacts and have them identified in return for locating them. The most recent iteration of the projectile point poster benefitted from earlier discussions with staff from Region One ESC, who noted that twenty-first-century students would embrace this sort of learning more easily through augmented reality. As a result, the new poster now has augmented-reality-enhanced photographs of local projectile points and short films embedded into the poster, making it ideal for educational purposes, community engagement, and research endeavors.

As a result of these points of contact, a growing number of prehistoric archaeological sites have been newly identified and located in the Rio Grande Valley.²⁴ The sites have been registered in the confidential Texas State Archaeological Site files; the materials have been identified and dated, and, most importantly, returned to the landowners to continue to share with their family. Archaeological sites on private property in the United States belong to the property-owner who, through our efforts, we hope now will see themselves as stewards of these precious non-renewable resources.

Coastal Deserts, Deflation Troughs, and Ancient Resources

After a dozen years of efforts on the part of the multidisciplinary team of the CHAPS Program, a more focused picture of prehistoric south Texas adaptations has emerged. Recognizing that this is a harsh, semiarid landscape with few secure sources of water has led the program team to characterize it not as a coastal plain but rather as a coastal desert. As defined by Gustavo Martinez and Peter Mitchell, these are zones that consist of "two quite different environments, one arid or semi-arid and terrestrial, the other littoral." They note that such zones become "even more complex where the arid or semi-arid environments are crossed by rivers that rise elsewhere and/or where they form part of ecotones in which different biological communities intersect." As noted by Geoffrey Bailey et al., such areas have globally been neglected or discounted in existing Pleistocene and Archaic accounts,

²⁴ Ashley Leal, "Danielle Sekulla Collection. Arrow, Dart, and Fragmented Projectile Points Found Within the Lower Rio Grande Valley Region," Special Report # 2, Community Historical Archaeology Project with Schools, University of Texas–Pan American, 2013; Roseann Bacha-Garza, "Eubanks Collection, Arrow, Dart, and Fragmented Projectile Points Found Within the Lower Rio Grande Valley Region," Special Report # 3, Community Historical Archaeology Project with Schools, University of Texas–Pan American, 2015; Roseann Bacha-Garza, "Paiz Collection, Arrow, Dart, and Fragmented Projectile Points Found Within the Lower Rio Grande Valley Region," Special Report #4, Community Historical Archaeology Project with Schools, University of Texas–Pan American, 2015; Roseann Bacha-Garza, "Smith Collection, Arrow, Dart, and Fragmented Projectile Points Found Within the Lower Rio Grande Valley Region," Special Report #1, Community Historical Archaeology Project with Schools, University of Texas–Pan American, 2014.

²⁵ Gustavo Martínez and Peter Mitchell, "Introducing Coastal Deserts," *Journal of Island & Coastal Archaeology* 12 (2017): 1–7.

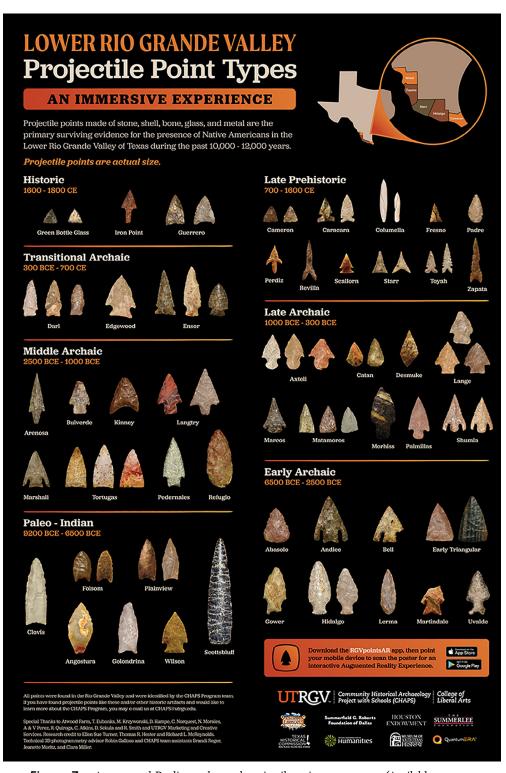


Figure 7. Augmented Reality–enhanced projectile point poster 2022 (Available upon request CHAPS@utrgv.edu).

"not least because most of the relevant evidence ($\sim 90\%$ in Pleistocene times) is now submerged on the seabed, and a recognition that coastal environments may have acted both as important population refugia and as primary corridors of population dispersal between and within continents." The Lower Rio Grande Valley (LRGV) is among that rare 10 percent that remains viable for archaeological research. The results of such research when viewed comparatively with other such coastal deserts may cast important light on global prehistory.

With fewer than four hundred entries in the Texas Archeological Site Atlas for the four-county region, the CHAPS Program team with undergraduate and graduate students from UTRGV sought to characterize and locate local stone and mineral resources and understand the human occupation of the largely waterless and inhospitable South Texas sand sheet. Bracketing this, the Rio Grande and Nueces River acted as funnels for the movement of human and animal populations into the interior. The riparian environments along their banks provided the food resources necessary for survival as well as water. The availability of fresh water is an all-important factor in survival. It is therefore likely that the archaeological record of human habitation or land is largely buried in the flood plains of these water sources. During hurricanes and tropical depressions, heavy rainfall would have drowned the flood plains, driving game and humans into the interior to await a return to the waterways. In the interior between the Rio Grande and Nueces River, there is evidence for human activities at ephemeral water holes, also known as deflation troughs.²⁷ At these resource nodes, game and edible flora would provide oases. Based on projectile point typologies, it becomes clear that these sites were repeatedly used. It is likely that these groups did not wander at random along the rivers and streams, isolated from contact with others. Rather, we envision a social network that facilitated the transfer of information and goods that stretched along the course of the major rivers and into the interior.

While foraging in the interior, sources for minerals such as salt and stone appropriate for making tools were identified. A quarry for El Sauz chert, a type of rock commonly used for toolmaking, was identified in Starr County.²⁸ Analysis of the formation and points by the CHAPS Program team using X-ray diffraction and portable X-ray fluorescence revealed that this chert has a distinct "fingerprint" of high titanium and zirconium content.²⁹ Based on this research, we now have evidence that this resource was exploited beginning near the end of the Pleistocene, some nine thousand years ago.

²⁶ Geoffrey Bailey et al., "The Coastal Shelf of the Mediterranean and Beyond: Corridor and Refugium for Human Populations in the Pleistocene," *Quaternary Science Reviews* 27, no. 27 (2008): 2095.

²⁷ Juan L. González, Russell K. Skowronek, and Bobbie L. Lovett, "Deflation Troughs, Water and Prehistoric Occupation on the Margins of the South Texas Sand Sheet, Evidence from Hidalgo County, Texas," *Journal of Texas Archeology and History* 1 (2014): 70–93.

²⁸ Kumpe and Kryzwonski, "El Sauz Chert," 33-39.

²⁹ Juan L. González et al., "Characteristics and Genesis of El Sauz Chert, An Important Prehistoric Lithic Resource in South Texas," *Lithic Technology* 39, no. 3 (2014): 1–10.

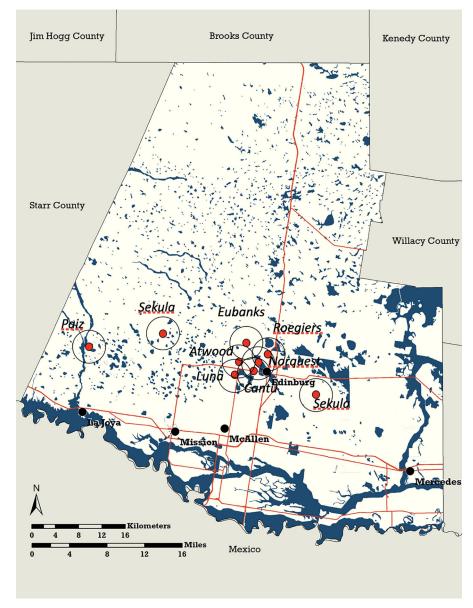


Figure 8. Archaeological sites in Hidalgo County identified by the CHAPS Program showing their proximity to ephemeral water sources. Circles indicate a 5 km diameter resource procurement area.

A larger analysis of stone tools now demonstrates that no fewer than seven rock types were used in this region of Texas in prehistory.³⁰ Some, like gravel chert, were carried down the Rio Grande from sources in the interior and deposited in

³⁰ Brandi Reger, Juan L. González, and Russell K. Skowronek, "Lithic Raw Materials in the Lower Rio Grande Valley, South Texas and Northeast Mexico," *Lithic Technology* 45, no. 3 (2020): 184–96.

Zapata, Starr, and Hidalgo Counties. Formed from 27.2-million-year-old Catahoula volcanic ash, El Sauz and petrified or silicified wood cherts were quarried or collected in Starr County. Others, like black chert from Tamaulipas south of the Rio Grande and Alibates flint from the Texas Panhandle, were from farther afield, suggesting long-distance exchange. South Texas is no longer an archaeological tabula rasa.

Ancient Landscapes of South Texas

Our latest initiative brings the historical sciences to bear on the topic of humanland interactions. Here, we work with scholars and teachers in the earth and social sciences to present the natural forces behind the creation and alteration of our regional landscape. We consider how people interacted with those landscapes in the past and, more recently, with landscapes changed by the Anthropocene. With interlocking TEKS earth and social science lesson plans and traveling trunks, students will learn in one class how ancient geological forces created sandstone, petrified wood, and chert and in another how people used these materials to build homes and make tools. An educational film, geoheritage photo book, bilingual map, and website are rewriting the story of South Texas and making it a destination for visitors and scholars seeking to explore the story of our past.

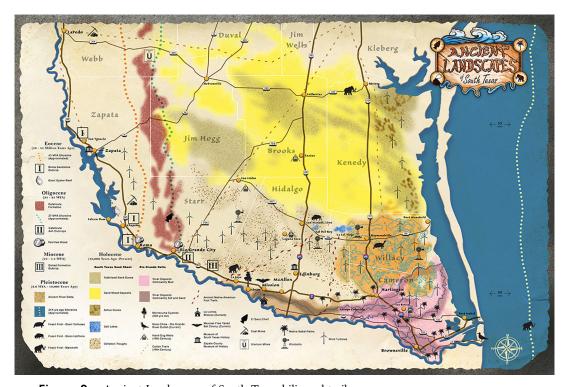


Figure 9. Ancient Landscapes of South Texas bilingual trail map.

Not a Conclusion, Only the Prelude

In February 2021, the CHAPS Program received the 2020 Texas Governor's Award for Historic Preservation from Texas Historical Commission, the highest such award in Texas. When paired with national and international accolades derived from the 2017 Daniel G. Roberts Award for Excellence in Public Historical Archaeology from the Society for Historical Archaeology, we draw confidence that our approach to situating public archaeology and history within geoheritage was appropriate.

In September of 2021, the University of Texas Rio Grande Valley approved the creation of a new degree in "Public Heritage and Community Engagement" to begin in the Spring of 2023. The CHAPS Program team worked with faculty in anthropology, art history, history, the library, and the School of Earth, Environmental, and Marine Sciences to win an NEH planning grant that made this new degree possible. In the spring of 2022, a new public archaeologist was hired to support the Anthropology and Public Heritage degrees. This individual will be joined by a public historian. Together they will build from the foundation that was laid by the CHAPS Program to a create an even more vibrant force in the public heritage community. We envision that moving forward, the CHAPS Program will continue to serve as the public face of UTRGV community engagement in the College of Liberal Arts.

All this has been done in an area, as noted above, that is extremely short of material and infrastructural resources. It is also an area about which the nation at large is ignorant and highly misinformed. This has led to the program's biggest hurdle: garnishing sufficient money to make its activities possible. On more than one occasion national granting agencies have greeted proposals for different CHAPS projects with the observation that this region is neither important enough nor interesting enough to merit support. The Rio Grande Valley Civil War Trail project, for example, initially approached a national agency for \$75,000 which was flatly denied. Only later did a small Texas-based foundation agree to provide startup support, offering \$7,500. Needless to say, the entire project had to be completely reimagined. But a major takeaway from the CHAPS Program's approach toward public archaeology is that a lack of resources does not preclude success. We recognize that the evidence of the past is often hiding in plain sight but is unknown and underappreciated by the local populace. We also understand that the past is lost incrementally through a combination of natural and cultural processes. An openness to working with colleagues in other disciplines and K-12 educators can make a larger impact and leave a greater legacy than any single excavation. We have found that an approach that combines education and community engagement with research is a winning trifecta which can preserve and interpret the past while training tomorrow's stewards of this legacy from elementary to graduate school. This requires working locally with chambers of commerce, and municipalities, and, more broadly, with colleagues beyond the region in universities, and state and federal governments. If recognition by a variety of organizations involved in historic preservation is any gauge, the CHAPS Program has been a success.

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We gratefully acknowledge the contributions of our late colleagues Bobbie Lovett and Kenneth "Rod" Summy to the CHAPS Program. And we thank our graphic artist E. Olga Skowronek for her expertise in finalizing the images for the publication.

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