THE CANUTILLO COMPLEX

EVIDENCE OF PROTOHISTORIC MOBILE OCCUPANTS
IN THE SOUTHERN SOUTHWEST

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ABSTRACT
Early Spanish documentary sources refer to a number of mobile groups in southern Arizona and southern New Mexico, including but not limited to the Jono, Jocome, Marrio, and Suma. These groups have remained unidentified archaeologically, and their history is often confused with that of ancestral Apaches. Investigations aimed at identifying and distinguishing the route of transitory and semisedentary groups who occupied the southern Southwest have renewed interest in the identification of an archaeologically definable complex that likely belongs to one or more of these historically referenced groups. Brief presentation of this suite of traits is designed to elevate the evidence of these mobile groups from obscurity and to encourage further investigations into the distribution and nature of this complex. Absolute dates, artifacts, and features on open sites and in rock shelters provide the basis for definitions of this complex that have remained invisible because of its general similarity to mid-mixing with Archaic assemblages. This article focuses specifically on the expression of this complex in the southern Southwest.

RESUMEN
Antiguas fuentes en documentos españoles hacen referencia a varios grupos móviles del sur de Arizona, incluyendo pero no limitado, a los Jono, Jocome, Marrio y Suma. Estos grupos siguen sin ser identificados arqueológicamente y, consecuentemente, su historia es anexada a la de grupos ancestrales Apaches. Investigaciones con el objeto de identificar y distinguir el comité de grupos móviles y semisedentarios que ocuparon la zona sur del Suroeste, ha tenido como resultado la identificación de un complejo definible arqueológicamente, que probablemente pertenecen a los grupos mencionados en estos documentos históricos. Una breve presentación del conjunto de características se diseñó para elevar la evidencia de estos grupos móviles de la invisibilidad y así abrir más investigaciones sobre su naturaleza y distribución en este complejo, fechas absurda, artefactos, y atributos en sitios abiertos y depósitos de piedras, proveer la base para definir este complejo que ha permanecido invisible debido a sus similitudes generales con los sitios mixtos, con agrupamientos Apaches antiguos. Este artículo se enfoca específicamente en la expresión de este complejo en la zona sur del Suroeste.
In the first half of the previous century when the primary culture groups of the American Southwest were being defined, a distinct lapse occurred after the prehistoric ceramic period. For what is commonly labeled the Protohistoric period, a series of historically referenced mobile groups have remained undefined archaeologically. Rouse (in Kidder 1975:42) recognized this problem decades ago when he noted that "archaeologists have been too preoccupied with the task of working out the nature and history of the Sedentary traditions to pay much attention to the Nomadic remains, and so we still know relatively little about them. They constitute one of the great unsolved problems of Southwestern archaeology."

This condition remains true after more than three quarters of a century of cultural historical reconstruction. After all of these decades, one must ask if the reason we have not yet identified remains of most of the mobile groups who occupied this region stems from the way we perceive the problem (Seymour 2002). Clearly our techniques of recognition are in need of refinement, but more importantly the conceptual framework surrounding this issue require examination, as does our perception of the terminal prehistoric period.

These issues are made directly relevant by the occurrence of late dates (A.D. 1400s through 1700s) found in association with a formal biface-oriented technology embedded in a larger constellation of traits. The late dates occur in a number of contexts throughout the southern Southwest and are consistently associated with a set of unique house types, flaked stone, groundstone, and occasionally plainware ceramics. The association of late dates with a definable set of material culture attributes, which are distinctive from those used by preceding ceramic-using sedentary groups and contemporaneous protohistoric ones, presents the possibility that these remains relate to a subset of the ethnohistorically mentioned mobile groups. The co-occurrence of features with portable artifacts in this complex suggests a migration of people with this tradition and a distinct way of life rather than simple movement of artifacts through diffusion or down-the-line trade.

This article presents recently obtained evidence for the identification of a non-Athapaskan mobile group archaeological complex. In doing so it offers a revised interpretation of the terminal prehistoric period in the extreme southern Southwest. Evidence of the Canutillo complex is clearly visible but has not been recognized for its significance and distinctiveness because, owing to similar technology, landscape use, and behavioral economy, it has been conflated with Archaic materials. This evidence has also been conflated with the Sobalpuri-O'odham because it is often found on and near their sites. The timing and nature of the appearance of this complex in the terminal prehistoric period has implications for the disposition of the potentially contemporaneous ceramic period sedentary culture groups as well as Sobalpuri-O'odham and early Athapaskan populations.

The geographic area of consideration is the southern portion of the American Southwest, essentially between the Pecos River in southern New Mexico and Texas and the Tohono O'odham reservation in southwestern Arizona (Figure 1). The Canutillo complex is the southwestern expression of a terminal prehistoric
and early historic adaptation that is found throughout this area as well as in
northern Chihuahua and Sonora.

FRAMING THE PROBLEM

Although documentary sources mention mobile groups in the southern South-
west, these groups have defied archaeological identification. Recently, however,
two new mobile group complexes have been recognized: one is inferred to rep-
resent proto-Apache (Cerro Rojo), and the other is inferred to represent non-
Ahtapaskan-speaking peoples (Canutillo). An explicit methodology is required
to establish a link between these archaeological complexes and the histori-
ically referenced groups. It is reasonable to infer that evidence of such groups has been
identified when an archaeological find (1) dates to the correct period, (2) lies
within the specified geographic area, (3) is consistent with the descriptions of
adaptation and landscape use in the documentary record, and (4) differs from
material and spatial remains of culture groups that precede it and surround it. All
of these conditions must be met, and once they are met there is a reasonable basis
to infer that archaeological evidence of one such historically referenced group has been
identified. This is where the Canutillo complex stands.

Archaeological practice has a protracted record of defining cultural unit
based on a constellation of traits occurring in unique and stable configurations of
space and time that were subject to change as a result of diffusion and migration.
While the notion of discrete and rigid cultural units has long since fallen from
favor and much more robust explanations for cultural change have been devised,
such culture group renderings are essential as an initial methodological step for
preliminary definitions of the subject of study.

Classification on the basis of a unique constellation of linked traits is fol-
lowed by independent explanations for the introduction of this new constellation
of traits, especially when distinctive configurations imply divergent organizational
systems and lifeways. The uniqueness of this new archaeological attribute set
suggests that Canutillo complex mobile groups arrived from elsewhere in the ter-
rninal prehistoric period to populate the southern Southwest. Showing that the
migrating group is an intrusive unit in the host region is consistent with Rouse's
(1958:64) criteria to demonstrate the movement of groups. The Canutillo com-
p lex represents a newly introduced traded-stone technological organization and
associated features that are without ceramic-period precedent in the southern
portion of the American Southwest (Seymour 2002, 2004a, b).

Rouse's conditions also state that it must be possible to trace this intrusive
unit back to its homeland, as also suggested by Haury (1958:1) for recent
examples, see Stark et al. 1998; Woodson 1999). The Canutillo complex pre-
serves "unmistakable elements" (Haury 1958:1) of a homeland that link it to
groups inhabiting the plains, hill country, and coastal plains of Texas (and north
both the Jocome and Jano, along with other mobile groups, wandered throughout a much larger area raiding, trading, and interacting with one another and more settled groups. For this reason, it will not necessarily be possible to separate these groups archaeologically based upon isolated geographic distributions of material culture in the way researchers have done in the past for more sedentary groups with more distinct territorial boundaries.

The Jocome and Jano were often mentioned together, indicating that they sometimes roamed together, that observers could not distinguish between them, that these labels had little basis in reality, and that chroniclers were uncertain as to which of the mobile group indigenous to the area in question was responsible for an act of interest. The Jocome and Jano were mentioned, sometimes along with other mobile groups, as raiding throughout northern Chihuahua, Sonora, and what is now southern New Mexico and southern Arizona (Naylor and Polzer 1986:585, passim). They were also named in an attack of a village of settled cultivators, the Sobaipuri-O'odham, at Santa Cruz de Cayanzapisia on the San Pedro in 1698 (Burns 1971). Throughout the documentary literature there are numerous references to Apache, Jocome, Manso, Sama, and other mobile groups living (or trading) with settled native populations, however temporary. At least once the Jano or Jocome (accounts are unclear) attempted to settle in or near riverside Sobaipuri-O'odham settlements and cultivate (Bolton 1960 [1986]), and apparently some subset of the Jano settled in missions in the El Paso area (Karns 1954; Seymour 2007a, 2008b).

Beckett and Cobert (1992:48) are of the opinion that the Jano, Jocome, and Manso are part of a larger tribal grouping, a stance that the archaeology of the Canutillo complex seems to support. Clearly these groups are reported within each other's territories and interacted with and fought alongside one another between the sixteenth and eighteenth centuries. It is understood from the published record that by 1773 the identity of these mobile groups was extinguished through intermarriage and assimilation owing to disease (Hackett 1957:507; Beckett and Cobert 1992:16) and warfare and that they "increasingly merged toward a single identity" with the Apache (Naylor and Polzer 1986:639; see also Seymour 2002, 2007a, 2008a).

Forbes (1959, 1960) referred to the Jano, Jocome, Manso, and Sama as being related to the Apache and of Athapaskan linguistic affiliation. This position has been largely discounted, although other researchers, such as Opler (1974:137-140), were also of the opinion that the Manso and Sama were Apachean based on the researchers' interpretation of the historical accounts and linguistic reconstructions. Opler (1974:138) even noted, citing Bandelier's 1883 observations, that the Manso were formerly using "a house type and carrying on economic and religious activities characteristic of the Apache." Yet mobile groups of a variety of origins constructed shelters that were similar to the ancestral Apache because shelter types are closely linked with mobility (Seymour 2008d, 2009). Archaeological
evidence indicates that the Canutillo complex cultural tradition was initially distinct from the Athapaskan one, and this has been inferred to represent all or a subset of these other mobile groups (see Seymour 2002, 2003a, 2004a, 2004b).

The documentary record indicates that the Janos "shared many traits with the Tanasco, Suma, and Jocome and allied themselves with them and the raiding bands of Apaches" (Naylor and Polzer 1986:507n2), whereas "The Jocomes were probably related to the Sumas and Janos. . . . They very quickly became assimilated by Apaches" (Naylor and Polzer 1986:528n2). In this perspective the Apache and these other groups started out as distinct but slowly transformed in identity and adaptation throughout the historic period. This is a widely shared perspective.

The documentary records present hints as to the lifeways (or behavioral economies) of these groups and the changing nature of their interactions. This provides a basis for inferring what types of tools they needed, what portions of the landscape were relevant, and how technology and landscape use might have changed as a result of intergroup strife and alliances and of degrading or improving environmental qualities.

THE NATURE OF THE COMPLEX

The Canutillo complex is one of two new archaeological complexes defined recently in the southern Southwest during research undertaken specifically to address questions of the archaeological correlates of these late groups and the implications for culture process (see Seymour 2002, 2004a, in prep 2004). Because the other complex (Cerro Rojo) can be attributed to the early Athapaskan occupants based on a variety of evidence (see Seymour 2002, 2003a, 2004a, 2004b), this Canutillo complex is credited in a generic way to non-Athapaskan mobile groups. (Further differentiation may be in order, but as an initial concretization these two archaeological divisions are sufficient.)

First defined (Seymour 2002, 2004a, in prep 2004) as a result of efforts in the El Paso–Las Cruces area, where it takes its name from a town along the Rio Grande (and from historical mention), the complex was concurrently traced throughout the southern Southwest and adjacent portions of northern Mexico. It was recognized as distinctive and important to a wider area because elements of it are found among the historic Sobahuitl of southern Arizona (Seymour 2002, 2008a). It intrudes upon the existing ceramic period El Paso-phase Jornada Mogollon. Classic period Hobokan, and Salado occupations in about the A.D. 1400s.

The Canutillo complex flaked-stone assemblage is composed of a relatively consistent set of tool forms including distinctive bifacial knives, unique round-shoulder perforators, small triangular arrow points with indented bases, distinctively formed steep-edge end scrapers, and bifacial technology. It is accorded an association with contemporaneous groups on the southern plains and hill country of southern and western Texas who had a similar tool kit that was made using a similar technique.

The Canutillo Complex people occupied rock shelters and constructed small dwellings in open terrain, such as on hills, terraces, and plains and river margins. Mobile group structures are similar across the southern Southwest and are represented by small vane outlines of rocks or clearings on a rocky surface that vary in some degree in size as well as in the number and mode of stacking of the rocks and in the types of rocks used, depending on local terrain characteristics (Figure 2). They are unlike Sobahuitl structures, which tend to be oval, elongate, or rectangular with rocks purposefully set in the ground, but they are made in a way that is similar to other mobile group structures, including the ancstral Chiricahua Apache (Seymour 2009). Outlines of Canutillo huts are generally too small to be conceived of as structures in the sense that most southwestern archaeologists would view them but are consistent in size (often 1.25 m to 1.50 m in diameter), with some of the small semisubterranean houses used by the Jornada Mogollon and by some mobile southern Texas, Trans-Pecos, and northern Mexican groups. Ethnographic reference to groups along the Rio Grande refer to these as "straw hats" (Hammond and Béy 1956:237, 218), probably referring to materials used in their construction and to their flimsy surface character.

A variant of calm burials may also be typical of this complex; several are known from terminal prehistoric and early historic contexts including those from near a small habitation site west of the Rio Grande near the Robledo Mountains. Others known from southwestern Arizona occur near sites that have produced Canutillo complex tools and debris (Seymour 2007b). Similar calm burials are known from Trans-Pecos Texas and northern Chihuahua, where they are definitively associated with various late complexes, such as the Cielo complex that may be a variant of Toyah (see Mallory 1987).

Dates obtained from Canutillo complex sites consistently place this phenomenon securely in the fifteenth and sixteenth centuries (see Table 1). Included are optically stimulated luminescence (OSL) dates from pottery on house floors and from nonfeature contexts. Radiocarbon dates are from bison bone from an open cienega site in the San Simon Valley in association with a Canutillo complex tool and also from charcoal found in a small well-defined fire pit that contained a temporally diagnostic projectile point. Several later dates from the historic period (A.D. 1600s and 1700s), not shown in Table 1, from other sites include a locus attributed to the Canutillo complex at a large multiethnic hilltop defensive site (Cerro Rojo Site) in the Hueco Mountains near El Paso (Seymour 2002, 2003a, 2004a, 2006). Consistent with interpretations of the documentary record of the Janos and Jocome, the distinctiveness of the complex fades in the eighteenth century.
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This fifteenth-century occurrence is later than the earliest known evidence of similar materials in southern and western Texas. However, so few dates have been obtained from the southern Southwest that it is statistically unlikely that the earliest occurring occupations have been identified. In all likelihood, the event of the in-migration had already occurred and was in full force by the fifteenth century, although full force by small, highly mobile groups was not likely to have been imposing or remarkable. The occurrence of materials from this complex during this time frame as far west as the Santa Cruz Valley and Ventana Cave supports this inference as well. The high degree of mobility and the expansive range also used probably mean that it did not take long for them to move into this far western territory.

THE SHARPLES SITE

The Sharple Site (AZ DD:8-44 [ASM]), located along the Santa Cruz River near Tubac, Arizona, is the most intensively studied site of this complex (Figure 3). Although the complex was not isolated elsewhere, the artifacts indicative of it

![Diagram of Sharple Site (AZ DD:8-44, ASM)]

- Structure
- Hide-Working Stone
- Aasvi Stone
- Ground Stone

FIGURE 3. Sketch Map of the Sharple Site (AZ DD:8-44, ASM).
were quickly recognized as having been previously attributed to the Sobaipuri and the Aztalan period (see Seymour 2005), thus, the complex was defined controversially by the author in southern Arizona. This led to an expansion of the known distribution of the complex to the west, where some of the best examples are now known. Later comparison to similar manifestations in southern and western Texas revealed that the complex has affinities there as well.

More extensive excavations and stratigraphic dating have been undertaken at the privately owned Sharplex Site than elsewhere. A complete surface collection, site mapping, and excavations of some of the structural features provide a basis for this component assignment. Associated artifacts are scattered across a large area: relevant features extend to the east of a prehistoric habitation-and-composed site boundary and overlap with the rest of the site, where Canutillo features incorporate prehistoric structural debris and abandoned adobe walls. A scatterg of Canutillo artifacts over melted prehistoric adobe compound walls reveals the lateness of the occupation, as do projectile points and debitage in the upper post-occupational fill layers of an earlier (A.D. 1100s) feature. Dates on numerous sherds and from thermal features, as shown in Table 1, confirm the late occupation suggested by stratigraphy.

Several feature types are present at the Sharplex Site, including small rock-ringed structures (see Figure 2). These are circular and small (1.25–2 m across) and lack interior features other than large boulders and cobbles that may have functioned as impromptu furniture or facilities. Cobble-size rocks and slabs were intentionally placed on the ground surface to form the structure perimeter. Here and at other sites where the surface is rocky, structure outlines may represent little more than the moving of rocks aside to form a clearing, sometimes with one rock stacked on or pushed against another. A date run on a flat-laying shed recovered from a structure produced a date of A.D. 1416–1496 (see Table 1).

The anvil stone is a distinctive feature type that is referred to as such because examples show evidence of focused pounding and battering. They are widely dispersed in the eastern portion of this site where numerous large embedded boulders have minimal use wear, suggesting use for a limited duration. In some instances these are surrounded by fresh-looking fine-grained chert chipping and debitage, suggesting their use as in the initial stages of lithic reduction.

Numerous instances of expedient groundstone cobbles and boulders cluster in the portion of the site with the anvil stones and the densest concentration of Canutillo complex flaked stone. These consist of mostly relatively fine-grained boulders with flat working surfaces. Unidirectional grinding facets broadcast their use as groundstone.

Four thin stone slabs placed upright, perpendicular to the ground surface, reveal evidence of purposeful edge modification (Figure 4). Protruding ends have been flaked to form a rough edge that would create resistance when scraped with a hide. These are inferred to be hide-working stones because they are similar to

the much larger versions found on the Plains. Processing of smaller hides here may account for the diminutive size of these stones. Excavation of a 2 x 2 m unit around one of these stones produced a bifacial knife consistent with others from this complex. From this association we may conclude that this tool was lost or left in place in this work area after concluding hide-working activities, an inference that seems to be confirmed by residue analysis on this tool that produced rabbit and fish along with other residues (Cummins et al. 2005).

The pottery present on this site represents a wide range of plainware varieties including thin-walled nicely executed O’Odham wares. These were likely obtained either through raiding or trading with Sobaipuri-O’Odham neighbors who occupied southern Arizona’s rivers at the time. Numerous other contemporaneous plainwares are also present on this site in low frequencies and will be described in forthcoming volumes. It is not yet clear which, if any, of these other plainwares were actually made by Canutillo complex groups. Most seem to be constructed using overline clay and temper sources, whereas mobile group ceramics are often self-tempered clays from related zones where many of the groups lived, although perhaps not these Canutillo people (Seymour 2001, 2006c). Yet so few of the brownwares from neighboring Sonora have been studied that it is difficult to ascertain origins with certainty. Limited petrographic analyses have been conducted, and many more samples are needed so that they can be considered in the context of a sourcing model appropriate to mobile groups.
The flaked stone associated with this complex is most densely concentrated in the eastern locus, although chipping actions are present overlying the prehistoric portion of the site. Several large fine-grained chert cores are present in the eastern locus. These were likely transported to this location from nearby areas as they are of materials not found on the site. Much of the debitage scattered across the site is of the same material as these cores.

The flaked-stone assemblage for this complex is distinctive and includes numerous small, basally indented, triangular arrow points (Figure 5); finely crafted bifacial knives of a couple of different shapes (as distinct from flake knives or expedient knives on flakes); and a series of other tool forms including backed knives, bulbous-based perforators with bifacially retouched bits, and multipurpose tools including scraper-graver combinations, teardrop-shaped to oval steep-edge end scrapers, and unifacial side scrapers. This distinctive style of flaking distinguishes these tool forms, as does the uniqueness of the final forms. These tools were clearly manufactured for their durability. Points and other tools are almost exclusively made on fine-grained materials such as chert, rhyolite, chalcedony, and sometimes obsidian.

Small triangular arrow points with indented bases and sometimes with serrated margins are widespread throughout the southern Southwest. Variations occur from southern and western Texas to southern Arizona. The widespread nature of projectile point distributions (side-notched and basally indented) has been referred to by others simply as horizon styles without further reference to the explanatory basis for the widespread distributions. Recurved or sinew-backed bows may provide one explanation, as might the two-piece nature of the arrow shafts to which they were attached. I have argued elsewhere (Seymour 2002) for their prominence during this time period because of their lethal nature owing to the prevalence of violence, including serrated edges that, according to the historic missionary record, were anointed with poison (see Treutlein 1949:202–203). Subtle variations throughout the southern Southwest suggest that they may be of value in differentiating some of the groups who occupied the area (for example, lot points from western Texas and Soto points from northern Chihuahua and the Trans-Pecos are distinct as a group from Huachuca points found on Cayetano-complex-Sobaapari sites, but as I have previously noted, arrows and the points attached were widely traded and were lost during use, making them less useful than many other attributes for distinguishing geographic distributions of culture groups [Seymour 2002: 2007b]).

Several distinctive thin chert bifaces and biface fragments have been recovered from the Sharples Site and from other Canutillo complex sites (Figure 6). These implements are bifacially reduced, often leaf-shaped, and sometimes beveled as a result of extensive resharpening and presumably from wear during use (see also Turner and Hester 1999:274–276). Negative flake scars on the surface of these implements indicate that broad flat flakes were removed. The sinuous edges that would have facilitated cutting were created through the removal of small triangular flakes in a parallel fashion along the margin.

Because of the nature of the tools being produced, the debitage associated with this complex has a distinctive character. Not only do the flakes look fresh or recent, with sharp edges and surfaces that are unmarred by weathering, but they also are reflective of a bifacial reduction technology. Long-expanding bifacial thinning flakes on fine-grained cherts and rhyolites were removed with a soft hammer, as indicated by diffuse bulbs, a lack of a bulb scar, and less pronounced ripple marks. These flakes often terminate in a feathered edge with a minimal margin, which is a by-product of precision collateral flaking. These are likely related to the production of the bifacial knives and other formal tools that required practiced reduction skills. Small triangular flakes of fine-grained materials of a variety of colors are typical as well, also indicating soft hammer percussion and pressure flaking. These exhibit many of the same characteristics as the larger bifacial thinning flakes but are smaller and triangular. Many of these small triangular flakes are waste products from biface sharpening, but larger flakes seemingly produced by the same means served as blanks for the production of points.

WHY THE CANUTILLO COMPLEX HAS NOT BEEN RECOGNIZED

It may be difficult to conceptualize artifacts in the Canutillo complex assemble as different from the Archaic because early efforts to characterize different cultures
in the Southwest mistakenly included items from this complex in the Archaic. For example, Sayles and others (1983) erroneously illustrate a Canutillo complex biface as representative of artifacts from the Chiricahua stage of the Cochise culture (see Figure 6). In that volume, the biface shown in Figure 9.4g that relates to the protohistoric and historic use of the rock shelter is the specimen that Haury (1975 [1950]:264;Figure 52) noted as "showing the best workmanship of all" recovered in the uppermost layer (0–0.5 m) at Ventana Cave. (The full extent of the Canutillo complex occupation at Ventana Cave cannot be discerned from the once-curated artifacts because they have been repatriated, and debitage descriptions sufficient to draw affiliation inferences are not included in the report.)

This type of biface is not indicative of an Archaic presence, but it does occur on single and multiple component Canutillo complex sites. It is noteworthy that in the Ventana report Haury (1975 [1950]:266) commented with reference to this biface: "Strangely enough, Sayles does not list them for any of the stages of the Cochise Culture and there are none in a large collection of artifacts from a surface site of the San Pedro Stage (Arizona TP:5:3) in the Arizona State Museum.

FIGURE 6. Canutillo complex bifaces. Top row: westernmost to easternmost in distribution: (a) Ventana, (b) Cienega Creek, (c) Second Canyon, (d) Pintada, (e) Cerro Rojo. Bottom row: (f) Sharples.

Survey. Any examination of the original Cochise culture type collections at the Arizona State Museum confirms Haury’s observation of their absence, which relates to their association with a later (non-Archaic) occupation.

When these original culture group definitions were constructed, archaeologists such as Sayles searched for patterns in artifact and feature traits throughout broad geographic regions. In the process of categorizing sites, many items of material culture relating to other time periods and culture groups were swept up along with the genuinely Archaic items. This is because most sites have one or two items on them that are indicative of other phases of occupation, and many are characterized by multicomponent occupations. Thus, the one or two items collected as grab samples have great potential to mislead archaeologists as to the affiliation and temporal association of the full sequence of occupation, and they can also be inadvertently subsumed into the wrong culture group complex. Later efforts to characterize the Archaic have unfortunately continued to collapse terminal prehistoric artifacts into the Archaic framework, even rejecting late dates as anomalous as occurred at Pintada Rockshelter (MacNeish 1998; Seymour 2000b; Seymour and Church 2007).

COMPARISONS TO ARCHAIC ASSEMBLAGES

Despite past and continuing practices of lumping these later materials with those of the Archaic, there are clear quantitative and qualitative distinctions between them. Canutillo complex bifaces and their resulting debitage may look superficially like Archaic materials simply because they are formal tools. The discontinuation of a focused formal tool technology with the advent of the ceramic period has led to the erroneous grouping of many formal tools into earlier preceramic stages. Yet with the rise of mobility in the terminal prehistoric a formal bifacial-based technological organization appears again. A variety of materials allow these to be distinguished from their earlier counterparts. The goals of production were similar (biface-oriented technologies aimed at producing durable cutting implements) in both earlier and later times, but the products are quite different. When comparing Archaic bifaces to those of the Canutillo complex, one is immediately struck by basic differences in technology, visual quality, and a number of physical attributes including the freshness of the flake scars on the Canutillo material.

These distinctions, as isolated through analyses too detailed for presentation here, include (1) differences in materials used (all-fired limestone and fine-grained basalt for Archaic versus fine-grained silicates for Canutillo along the same drainages); (2) differing degrees in patination and dullness versus sharpness of edges related to age; (3) stylistic differences including chunky, thicker, and asymmetrical Archaic bifaces versus the symmetry, high-quality flaking, and thinner Canutillo ones as reflected through visual inspection as well as in number of
marginal flake scars; (4) the distinctiveness of shape between the thin ovate or leaf-shaped Canutillo bifaces (and other forms, not shown in Figure 6) versus San Pedro bifaces, for example, that are triangular in form, with a broad or expanded base that tapers toward the opposing end; and (5) the distinction of Canutillo complex and the Archaeic San Pedro and Chiricahua materials also apparent with regard to biface length, width, and thickness.

By a variety of measures and considerations the Canutillo complex materials are distinctive from the Archaeic assemblages that are found in the same geographic areas, often in similar environmental and physiographic settings and, many times, on the same multimaterial sites. These bifaces are but one of the many tool types found on these Canutillo complex sites, but they serve as an example of the uniqueness of this protohistoric assemblage from the Archaeic assemblage with which they have been confused.

THE BEHAVIORAL ECONOMY BEHIND THE TOOL KIT

As distinctive as is the tool kit, the complex has remained hidden because it is so reminiscent of the technological assemblage that characterizes the Archaeic period and because the features are unobtrusive and outside of expectations with regard to their small size and inconspicuous nature. This similarity to the Archaeic might be expected for those who consider that technological approach to tool production is bound closely with adaptation and the desired performance characteristic of durability for mobile groups (Rindos 1991; Shott 1986). In portions of the Southwest, it is generally accepted that expedient technologies correspond with sedentary agricultural economies, while those that are biface-oriented or more formal tend to correlate with mobile groups because of the extended use life and greater durability of the tools. This focus on behavioral economy is fundamental to understanding and explaining the geographic distribution of this complex. These widespread similarities imply that these small mobile groups of the terminal prehistoric and historic periods throughout a broad geographic area had similar technological requirements for their tools.

These requirements emerged about the time bison became abundant in southern Texas owing to climatic changes (see Ricklis 1992), and so it is thought that Toyah and related complexes arose in southern and western Texas as a bison-adapted technology. Tomka (2001) has suggested that durability is the operative performance characteristic of these bifacial tool forms and accounts for their widespread use among those who hunted and processed large game. He and Seymour (2002, 2007a, 2008a) are both of the opinion that the broad geographic distribution of these tools may be related to the spread of the hide trade involving bison and, in the Southwest, probably other large game species. This was during a time characterized by high mobility and permeable social boundaries, perhaps accounting for the wide geographic distribution of these tool forms among mobile hunters and the more stationary groups with whom they associated (e.g., the Sobaipuri).

New evidence (and compilation of scattered existing evidence) of bison exploitation in the terminal prehistoric and early historic periods in southern Arizona and southern New Mexico suggests a potential reason for the initial distribution of the Canutillo complex material culture assemblage (Seymour 2002, 2003b, 2004b). A Canutillo tool recently found in association with bison bones, one of many similar kills at this site in the San Simon Valley, has been radiocarbon dated to cal A.D. 1440–1530 (cal B.P. 530–450) and cal A.D. 1560–1630 (cal B.P. 390–320) (Beta-179882) (see Table 1; see also Seymour 2004b). This along with other evidence indicates that Canutillo complex groups were this far west and that they were initially exploiting bison as a portion of their diet, partially explaining the presence of this unique assemblage (Seymour 2004b). Evidence from other sites farther west, including the Murray Springs Paleoindian site on the upper San Pedro, has produced later evidence (after A.D. 1200) of bison (Agenbroad and Haynes 1975), and Di Peso (1953, 1956) noted the presence of possible bison (or cow) bone in historic contexts on the San Pedro and Santa Cruz. More recently, Mead and Johnson (2004) reported evidence for late bison in the San Rafael Valley. Although Agenbroad and Haynes (1975) presented evidence for widespread late prehistoric bison in southern Arizona at a number of sites, archaeologists have had nowhere to compartmentalize this information because it did not fit with models of late prehistoric or protohistoric subsistence practices. Consequently, it comes as a surprise when more recent evidence is presented of bison kills in southwestern Arizona in association with Canutillo materials and late dates.

Although the tool kit so characteristic of this period may have been initially adapted to bison exploitation, in the Southwest bison were probably not sufficiently dense to explain its occurrence, and there is evidence that these western groups had a relatively broad subsistence base. As noted by Fritz (1977, 1989), mountain sheep may have been the preferred large game resource in portions of Arizona, and certainly deer, antelope, and elk were exploited as well. It is clear too that the Canutillo complex subsistence base was quite diversified, a finding that is consistent with the pattern noted for related sites in Texas (Johnson 1994). One common attribute of many of the Canutillo complex sites in northern Chihuahua and southern New Mexico is the presence of small shattered and splintered tooth and bird bones (burned and unburned).

Documentary sources indicate that those groups inferred to be responsible for the Canutillo complex exploited the plays, marshes, and lakes for lacustrine species (Hammond and Rey 1966). Thus, it is not surprising that certain classes of Canutillo complex sites tend to be situated near the margins of plays, around divers, and along rivers. During the wet season watercourses would have flooded, spilling over into riverside marshes and oxbows and stranding and providing a
and lake resources. The introduction of this new technology represents a break from lithic traditions associated with the local ceramic periods. The technology has affinities to tool kits in southern and western Texas and northern Mexico. The lack of local precedent in the Southwest and an eastern parallel tradition support the notion that these mobile hunters migrated west or north in or before the fifteenth century.

The Canutillo complex is not coterminous with any one prehistoric culture area. The technology is foreign to the prehistoric culture groups (Hohokam, San Simon Mogollon, Mimbres, and Jomada Mogollon) that it overlies. Its distribution is not as widespread as the historically documented Athapaskan occupation. It is not made in the later O’odham tradition, nor is it fully represented in the contemporaneous O’odham traditions. The single exception is in relation to the Covarrubias complex materials referred to as Sobaipuri, where there are strong similarities to the Canutillo lithic technology. I have argued that one or more of these mobile groups mixed with the Sobaipuri (Seymour 2003b, 2004a, 2005b, 2007a, 2009a), in part because the documentary record makes reference to this correspondence (Bolton 1960 [1936]:248-249n2; Underhill 1939). Sobaipuri ethnogenesis likely involved the mixing of O’odham and one or more mobile groups to create their unique character relative to other O’odham groups. The Sobaipuri were viewed as different and more warlike during their day (Underhill 1939:16-17), and they possessed remnant traits that suggest a Pinal or Apache affiliation (Underhill 1939). Their flaked-stone assemblage reflects this mobile-group association as well, particularly with the adoption of the new technological organization. On the other hand, occurrences of some Canutillo complex materials on and near Sobaipuri sites unmistakably pertain to the Sobaipuri occupation and in other cases clearly represent a separate, perhaps contemporaneous, locus of occupation.

The Canutillo complex represents a unique constellation of traits that co-occur with and are functionally related to their mobile lifestyle. Structures and other feature types are consistent with the mobile adaptation, as is their distribution within sites and across the landscape (Seymour 2008c). Features are found in association with flaked stone and sometimes with unique plainwares, sometimes with the traded or raidied plainwares of contemporaneous groups. Both open sites and rock shelters are known and have been chronometrically dated. Although more dates are needed, suites of dates from sites that are widely dispersed throughout this region indicate that this complex appears in the southern Southwest by the A.D. 1400s.

Documentary sources mention several mobile groups for which a distinctive material culture set should be definable. Two new and very different mobile group complexes have been defined that date to this late period. The Canutillo complex is fundamentally different than the complex attributed to the early Athapaskan speakers, suggesting that one or more of these other mobile groups...
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