LITHIC MATERIAL TYPES AS A CHRONOLOGICAL INDICATOR IN THE ARCHAEOLOGICAL RECORD OF SAN DIEGO COUNTY

Andrew R. Pigniolo
KEA Environmental, Inc.
1420 Kettner, Suite 620
San Diego, CA 92101

ABSTRACT

Early research into the prehistory of southern California suggested that lithic material preference was associated with changes in chronology and culture. The preferred use of Santiago Peak volcanics, Eocene cobbles, and quartz were seen to roughly correspond to the San Dieguito or Paleoindian, La Jolla or Early Archaic, and the Late Prehistoric or Late Archaic periods, respectively. Other observations on the changing preference for Coso versus Obsidian Butte obsidian and a Late Archaic increase in the use of "exotic" materials have also suggested that material type preference may play a role as a chronological indicator. More recent research has suggested that some of these relationships may not be so clear and overall use may be more a reflection of resource availability. Many of these hypotheses have been poorly tested but offer important insights into human behavior. This paper looks at the relationship between material type preference and chronological/cultural change in western San Diego County through an examination of existing theory, site assemblages, and resource availability.

Introduction

Archaeologists search for patterns in the record of human behavior. Sometimes the patterns we see are not so absolute and are not caused by the reasons we have come to expect. There are clearly patterns in the prehistoric use of lithic materials. Most of these patterns are related to source distribution, while others reflect reduction techniques, production goals, and raw material size, quality, and abundance.

This paper is underlain by three assumptions: (1) people tend to use the best resources closest at hand; (2) people do not ignore important resources; and (3) there are broad patterns of cultural change in North America that are more expansive than individual cultural or linguistic groups of people. These patterns have been called Paleoindian, Early Archaic, and the varying groups that followed such as the Late Archaic or Late Prehistoric ancestors of the Luiseño and Kumeyaay people in western San Diego County. These broad patterns represent general economic assemblage stages and differ from the cultural/archaeological implications that have been built around the commonly used terms San Dieguito, La Jolla, and Late Prehistoric.

Archaeologists in San Diego County have made a variety of assumptions associating shifts in material type and source preference with chronological/cultural stages. General assumptions that have underlain much of the research in the region are that: (1) there is a direct association between fine-grained "felsites" and volcanics of the Santiago Peak volcanic formation and the Paleoindian period; (2) there is a direct association between the Early Archaic period and the use of coarse-grained cobble volcanics and quartzites; and (3) the Late Archaic assemblages contain more quartz, chert, and obsidian, and most of the Late Archaic obsidian is from Obsidian Butte. These relationships tell something of both the behavior of prehistoric people and of archaeologists interpreting the past.

Materials

The diverse geology of the western portion of San Diego County has resulted in a relatively abundant and varied set of lithic materials. Important for the discussions here are five general types of lithic material and their source provenience: fine-grained metavolcanics from the Santiago Peak volcanic formation; coarse-grained well-rounded cobble volcanics, and quartzites from Eocene and younger sedimentary formations; quartz from the San Onofre breccia formation and pegmatite dikes in the Peninsular Ranges batholith; cherts from various limited coastal and desert sources; and obsidian from the Owens Valley region and Obsidian Butte.

The oldest of these materials are the metavolcanics of the Santiago Peak volcanic formation. These rocks are diverse in lithology and include a variety of slightly metamorphosed rhyolites, dacites or rhyodacites, and andesites (Jahns and Lance 1950). They represent the remnants of a Jurassic island arc system where volcanic materials were deposited in a marine environment (Gorzolla 1994). This arc system remains as a series of low coastal mountains extending from the Santa Ana Range into northern Baja California. The later metamorphism of this formation has resulted in an increase in silica content, giving many of these materials good conchoidal fracture and flaking qualities (Williams 1985). Varieties of this material, particularly those that are grey-green, have been incorrectly termed "felsite" in the early archaeological literature (Rogers 1929). Similar materials in the Sierra Nevada are termed greenstone (Pryor et al. nd.).

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In contrast, the well-rounded volcanic and quartzite cobbles were deposited on the coastal plain of southern California during the Eocene, in huge deltaic marine and terrestrial deposits (Kies 1982). These clasts were moved from the vicinity of Sonora Mexico in large river systems and are very well-rounded and durable stones (Kies 1982). Most of this material consists of "rhyolitic to dacitic volcanic and volcaniclastic rocks and up to 10 percent quartzite" (Kennedy 1975). These cobbles were deposited in a series of formations and were later reworked into younger formations on the coastal plain. They are very abundant on the coastal plain and represent the only available source of lithic material. Remnants of the river channels that brought the materials from the east are present in some of the interior valleys, and although less abundant, some of the cobble materials can be found there in isolated primary and secondary deposits (Weber 1963).

Quartz is also an important lithic material, particularly in northern San Diego County where good quality volcanic materials are more limited. The San Onofre breccia formation contains small clasts of milky to clear quartz that provided a coastal source for this material. The formation has an unusual origin to the west of the current coastline, and remains in a series of coastal mountains in the northwestern portion of the county. Secondary deposits in nearby formations also include some of these quartz materials.

Pegmatite dikes in the Peninsular Ranges batholith are the other important source of quartz in San Diego County. These materials occur in isolated deposits throughout the montane area with a particular concentration in the northern portion of the county near Pala Valley. This material occurs in fractured chunks of limited size, and cores are often small (Waugh 1986:83).

Chert sources are limited in San Diego County (Norwood 1982). The Piedra de Lumbre source is the most important, while other bedrock sources have more limited distribution (Pigniolo 1992; Waugh 1986). Formations to the north, and in desert areas to the east, also provided potential sources of chert, but in most cases core/clast size is small and the material is not abundant.

Obsidian from the Coso Hot Springs and Casa Diablo quarries in the Owens Valley area has been widely distributed in California (Hughes 1989). It is found in both Early and Late period sites in southern California (Hughes and True 1985). Obsidian Butte, near the Salton Sea in Imperial County, is another important source of obsidian. Its constant availability has been a point of question for some time (Chace 1980), but it appears to have been a highly desired material. All of the lithic materials described above played important roles in the lives of prehistoric Native Americans in the region and their changing use can lead to the discovery of patterns of human behavior.

Paleoindian and Early Archaic

Without radiocarbon dating and previous archaeological research to work from, Malcolm Rogers, the pioneering archaeologist in San Diego County, was a man grasping for patterns in a diverse archaeological record. The patterns he initially recognized remain with us to this day. In Rogers' 1929 article *The Stone Art of the San Dieguito Plateau*, he established two critical patterns that have shaped most later work: finely flaked materials were associated with artifacts characteristic of the Paleoindian period and crudely flaked materials were associated with milling and marine shell indicative of the Early Archaic period. Whether stated directly or implied, crudely flaked artifacts were made from coarse-grained cobble volcanic and quartzite material, or as he put it "split stones," and finely flaked material was associated with fine-grained metavolcanics, or as he called them "felsites," of the Santiago Peak volcanic formation. The direct linkage between continent wide developmental stages and local qualities and types of rocks has led to the confusion of San Diego County archaeology from that publication on.

As a geologist and an archaeologist with nothing to work from, Rogers used every tool he could to identify patterns in the archaeological record. In his 1939 publication on the archaeology of the southern deserts, Rogers examines each period and tool type for associated preference in material type (Rogers 1939). The dramatic difference between coarse-grained cobble based tools and fine-grained felsite tools was an easy pattern to spot in coastal San Diego County. With nothing better to work with, he and many archaeologists after him accepted these sharp differences as cultural rather than related to the qualities of the material. The differences in the distribution of these materials and Rogers' association of shell with the Early Archaic and hunting tools with the Paleoindian also linked ecological differences with the developmental stages. The problem he left us with is that these linkages were seen as nearly absolute. The linkage of material quality, technological ability, material type, economic pattern and cultural/chronological stage has left archaeologists holding a bag of things that may look good together, but do not quite fit. They do fit general trends, so it has been difficult to eliminate these links and find the real pattern in prehistory.

Important for this paper is that Rogers took the truly cultural differences between the Paleoindian and the Early Archaic and linked them with the material differences. This linkage has led to two major states of confusion. The first is related to the differences in the flaking qualities of the materials and the association of crude with the cobble material (and by Rogers' linkage, the Early Archaic), and the association of skilled flaking (and by Rogers' linkage, the Paleoindian) with Santiago Peak volcanic material. This confusion immediately led to the reversal of the Paleoindian and Early Archaic patterns in Rogers 1929 publication on the grounds of cultural evolution and the assumption that crude should come first. A series of other hypotheses about dual cultures living side by side and a pre-San Dieguito La Jolla culture have arisen from this confused linkage (Brian F. Smith and Associates 1987; Moriarty 1987; Smith 1987).

The second major state of confusion is related not just to the qualities of the two different types of materials but the materials themselves - the assumption that Paleoindians used San-

tiago Peak volcanics and that Early Archaic people used Eocene cobbles. Whenever the twain met there was confusion. Rogers' linkage between Paleoindian and volcanics is best illustrated by Julian Hayden, a direct associate of Rogers, who stated, "San Dieguito occupation may be said to be confined essentially to volcanic regions" (Hayden 1987:43). Examination of the distribution of "Scraper-maker," or Paleoindian sites, and "Shell-Midden," or Early Archaic sites, in Rogers 1929 publication (Figure 1) shows that Paleoindian sites are limited to the areas surrounding the Santiago Peak volcanic formation. These areas would be the direct procurement areas for this material. Early Archaic sites are limited to the coastal plain where cobble resources are available in abundance.

This pattern only became muddled with time but its underlying premise remains with us today. Rogers later identified Paleoindian artifacts, such as crescentics, on sites within the coastal plain along with other artifacts of Santiago Peak volcanic material. His coastal site records include many "La Jollan" sites with San Dieguito components and reexamination of these sites continues to confuse us (Gallegos 1987).

As Ezell (1987:18) said, the bedazzlement by "lovely green hornfels" at the Harris Site has also led to confusion in interpretation. Locus II of this site was initially seen by both Rogers and Warren (Warren 1966) to represent Paleoindian occupation, but radiocarbon dating and more careful examination of the assemblage has determined it to be Early Archaic. The confusing element is that Santiago Peak volcanic material is held constant because of the proximity of both loci to the resources. The same may be the cause of confusion resulting in the observation that the only distinguishing traits between the Early Archaic and Late Archaic assemblages at the Harris Site were the introduction of ceramics and small points (Warren 1966:18). Clearly careful technological examination has taken a secondary place behind gross material and morphological traits.

Although Warren (1966) notes the same materials were used by the Paleoindian, Early Archaic, and Late Archaic occupations at the Harris Site, he does suggest, without quantification, that cryptocrystalline materials, quartz, and quartzite were more common in the levels above the Paleoindian deposit (Warren 1966:14). Warren indicates that the majority of material throughout all three components was Santiago Peak volcanic. The excavations by Carrico et al. (1993) at the CA-SDI-4935B portion of the Harris Site Complex show no shift at all in material type selection between the San Dieguito and La Jolla components, indicating the characteristic use of cobble material in the La Jolla complex (Warren 1987:75) is not universal and cannot be used to separate these groups.

The Rancho Del Dios assemblage presented the same enigma as Locus II when the focus was the patinated felsite and large bifaces (Kaldenberg and Bull 1975). The San Dieguito Estates project made the situation more confusing when an area where both types of resources were available was examined (Norwood and Walker 1980). At Rancho Park North, Kaldenberg saw green felsite tools, when present, as indicating the San Dieguito because of the linkage made at the Harris Site, regardless of the fact that the same qualities were present in a local variety of black Santiago Peak volcanic (Kaldenberg 1982).

This linkage of developmental stage with lithic material is still with us (Warren et al. 1993). Figure 2 shows the current template of a Paleoindian assemblage. The pattern to notice behind the artifacts themselves is that all these tools are made from quarry based material and probably from the Santiago Peak volcanic formation. Figure 3 shows the mental template of an Early Archaic assemblage. Notice that all the tools including the biface are cobble based. They are probably made from the coastal Eocene cobble volcanic and quartzite materials. Finally, Figure 4 shows the ideal view of a transitional San Dieguito-La Jolla assemblage. Notice the large tools are cobble based and the bifaces are probably Santiago Peak volcanic.

This pattern is clearly not random and has led to the identification of only three pure Paleoindian sites (Warren et al. 1993). Is it any wonder that all three of these sites are near Santiago Peak volcanic outcrops, are dominated by this material, and that no clear Paleoindian sites can be identified elsewhere in western San Diego County? All others are transitional, in part, because they contain other materials. The same linkage that Rogers established in 1929 remains a continuing problem with San Diego County archaeology today.

The problems with Paleoindian material in association with cobble based lithics can best be explained by people using available resources close at hand. Do we really think the San Dieguito were so poorly adapted that they could only live near good quality volcanic rocks? That people in the Paleoindian period were somehow limited to geologic islands or had to carry appropriate lithic materials tens or hundreds of miles to live elsewhere? That they were so specialized and unlike other cultures that they were not able to adapt their technology to other materials? The Paleoindian assemblages from landscapes without volcanic resources, such as Tulare Lake and the entire Midwestern United States suggest otherwise. What would the San Dieguito assemblage from the Harris site look like if it were made from cobble quartzites and coarse-grained porphyritic volcanic cobbles?

Perhaps a Paleoindian assemblage in another geologic landscape could look like the assemblage from Windsong shores (Gallegos 1991) and other transitional San Dieguito-La Jolla sites (Moriarty 1967; Warren et al. 1993). Scraping and chopping tools could easily be made from the expedient use of local cobbles but they would look technologically somewhat different, "crude," and "La Jollan" to our eyes due to material quality and our underlying mental template. Large bifaces and some tool categories would not be needed to the same extent for the exploitation of coastal resources, but where they were needed, they would probably be made from imported Santiago Peak volcanic material because of the core size and reduction techniques needed for their manufacture.

The presence and abundance of milling in these transitional sites is another matter for study. Perhaps after all the

debate, this activity is a larger component of maritime adapted Paleoindian occupation but less of a component in inland occupation. Alternatively, the abundance of milling should also be critically examined in the context of multicomponent resources, and the heavy amount of bioturbation and artifact movement that has been identified in the deposits of coastal southern California (Erlandson and Rockwell 1987; Gross 1992). Isolating a single Paleoindian cultural component from environmental and site formation effects should be no easier here than it has been elsewhere in the west. This does not, however, invalidate the existence of the continent wide pattern.

This argument flies in the face of much of the ecological and adaptive work that has been done (Moriarty 1969; Warren 1967, 1968). It is clear, however, that the people of the Paleoindian period were well adapted to all the environments in North America. Adaptability to local resources can been seen as a broad pattern of hunter-gatherer behavior, whether Paleoindian people were eating artiodactyls, rabbits, and tortoise at inland desert lakes (Douglas et al. 1988), shellfish at Agua Hedionda Lagoon (Gallegos 1991), or other maritime resources on the Channel Islands (Erlandson 1991). The evidence summarized by Erlandson and Colton (1991) for Paleoindian adaptation to coastal resources cannot be denied whether you call them San Dieguito or just Paleoindian.

Without the distinction of material type, the differences between the Paleoindian and Early Archaic assemblages are more difficult to distinguish. Perhaps some of the continuity in adaptation identified by Jennings at Danger Cave (Jennings 1957) is reflected in the transition between the Paleoindian and Early Archaic on the San Diego coast, leading some to lump the two stages (Bull 1983, 1987; Gallegos 1987). Adaptive continuity should not be mistaken for technological and cultural continuity. Unfortunately, those who would lump are not looking at the larger pattern throughout North America. They are looking for individual cultural units moving on the landscape when all they can barely hope to glimpse is a broad technological and economic continent wide pattern with adaptations to local resources.

All of which is not to say there is no association between the Paleoindian period and the use of volcanics, but it is to say that the association is secondary and related to the types of tools desired and the techniques used to make them. The same association is also present in the Early Archaic.

Rogers (1966), Vaughn and Warren (1987), and Hayden (1987) have noted a true association between the large biface traditions of the Paleoindian stage and the use of volcanics but unless you think the assemblages from the Dietz Site, the Sevier Desert, Tulare Lake, and China Lake are somehow not genuine Paleoindian because they are made from local obsidian and cherts, this association is not direct and exclusive. The association appears to be secondary and more related to resource availability, quality, and core size needed for the reduction sequence required to produce these tools (Cook 1985; Simms 1988; Vaughn 1982).

There is little doubt that material quality and core size are general factors involved in producing the large leaf-shaped biface tools, points, and crescentics associated with the Paleoindian period. Paleoindian sites characterized by these tools should contain a greater abundance of high quality materials from sources with large available core size. In much of the west the most abundant material meeting these requirements is volcanic, suggesting that the Paleoindians were not just "confined essentially to volcanic regions" (Hayden 1987:43) and that all Paleoindian sites in San Diego County do not need to have artifacts made of felsite or be located within the direct procurement area of Santiago Peak volcanics. It is only more likely that these materials would be selected for the specific production goals of large bifaces and crescentics resulting in a trend toward use of this material.

Early Archaic

The Early Archaic assemblages in western San Diego County follow this same general pattern of material use which has made them difficult to distinguish from Paleoindian sites in coastal areas, and has also led to the idea that some of the projectile points are imported by people moving into the area from the desert or other places. A tradition of large leaf-shaped biface production continues in the Early Archaic as seen at Locus II of the Harris Site (Warren 1966) and Salt Creek (Pigniolo and Gallegos 1990). The stone and core qualities needed to produce these tools are best found in Santiago Peak volcanic material and these tools are found in greatest abundance in the manufacturing areas near the quarries themselves. Smaller dart points are also made largely of Santiago Peak volcanic material because of its relative availability and flaking qualities. Because large core size is not required, a wider range of fine textured cherts and other materials could be used for point manufacture, leading to an increase in the use of these materials in the point assemblages and the perception of extralocal influence. This contrast in material requirement is best seen in coastal sites where the heavy use of cobble materials contrasts sharply with the occasional fine-texture dart point material (Harding 1951).

Although this pattern of dual material use continues, again resource availability is the dominating force. With a focus of human occupation on abundant coastal lagoon resources during the Early Archaic, most Early Archaic site assemblages are dominated by the use of cobble volcanic and quartzite resources. Rogers' linkage between the cobble tools and the abundant Early Archaic assemblages is not without some justification, but again the association is not direct and exclusive. Locus II of the Harris Site and CA-SDI-7197 at Salt Creek (Pigniolo and Gallegos 1990) and other sites in the San Miguel Mountain area (Davis and Hector 1989) show that archaic sites can be almost completely focused on the use of Santiago Peak volcanics. Inland Archaic Pauma Complex sites also show use of local cobble resources, where available, but continue to rely on Santiago Peak volcanics because cobble materials are not abundant. Other sources of material with small core size, such as quartz, was of limited use in the Early Archaic assemblage which was dominated by the use of large scraping and chopping tools. The material use pattern for the Early Archaic is thus dominated by the use of cobble materials

followed by Santiago Peak volcanic materials because these sources provided the core size and flaking qualities that were needed to produce the tools required for subsistence in the Early Archaic and because much of the subsistence was focused on lagoon resources in areas where cobbles were the most available resources.

Late Archaic

In contrast to the Early Archaic coastal economic focus and artifact assemblages dominated by large scraping and chopping tools, the shift to the Late Archaic stage resulted in widely distributed assemblages numerically dominated by small flake-based tools and arrow points. This shift from an emphasis on large to small tools resulted in an increased ability to use materials with smaller core sizes. The increased flexibility to use smaller core materials for the bulk of the tool assemblage created most of the fundamental shifts in material type use seen between Early and Late Archaic assemblages.

The contrasting relationship between tool size and material type can best be shown in the northern portion of San Diego County where Santiago Peak volcanic and cobble materials occur more rarely and quartz is abundant. The tool size shift here resulted in a dramatic change in material type frequency of use from Santiago Peak volcanic and cobble materials to the more readily available quartz (True 1966). Because, however, larger core tools continue to be present in Late Archaic assemblages, although in reduced frequency, the material types used for these two size sets of tools stands in marked contrast, supporting the relationship between tool size and available material that could be used to make it. At the Molpa Site (True et al. 1974), quartz makes up 78 percent of the chipped stone tool assemblage but none of the scrapers and choppers are made of quartz. Most are basalt and felsite. The same pattern can be seen when the material types of the larger tools from other San Luis Rey complex sites (Waugh 1986) are compared to the smaller tools which are dominated by quartz.

Quartz is an abundant material in northern San Diego County and became the dominate material in Late Archaic sites in this region because of its ability to be used for the manufacture of small tools, abundance, and the limited amount of alternative material sources. True noted that the frequent use of quartz by the Luiseño, in contrast to the Kumayaay material use pattern, was largely the result of availability within Luiseño territory (True 1966).

This does not mean that quartz was more frequently used everywhere in San Diego County during the Late Archaic. Although an increase in the use of quartz in some Late Archaic southern San Diego County sites can be seen (Carrico et al. 1994), other sites appear to show little or no shift in material choice but continue to reflect the most common material at hand. At Late Archaic sites located adjacent to Santiago Peak Volcanic sources such as CA-SDI-11,626 at Salt Creek (Pigniolo and Gallegos 1990) and CA-SDI-13,504 next to the Harris Site, the material used is predominantly Santiago Peak volcanic. The shift to smaller tools allowed for more use of smaller core material but it did not create a need for change to other materials.

In terms of Late Archaic material preference, it should be noted that mountain dwelling ethnographic informants in northern Baja California listed clear and milky quartz first and second, respectively, in flaking qualities (Hohenthal 1950:10). This selection probably reflects the closest material available to the informants and limited availability of good quality Santiago Peak volcanics in the region, as well as an attitude toward its use and the "power" inherent in quartz. Archaeologists have found non-crystalline quartz very difficult to work (Waugh 1986). High Santiago Peak volcanic use in the montane area of southern San Diego County suggests a heavy reliance on this material along with quartz, where both materials are available. Overall, the increase in the use of quartz from the Early to Late Archaic is not uniform, but does reflect the most available lithic resources and their qualities.

Another shift related to the increased use of smaller tools may be related to the perceived increase in desert influence and in the use of "exotic" materials. Moriarty (1966) noted that in the Late Archaic "the variations and importation of mineral types expands with quartzites, obsidian, felsites, and cryptocrystalline materials now beginning to appear in quantity" and the same pattern has been observed elsewhere (Moriarty 1968).

Several sources of chert have been identified in western San Diego County since Moriarty's observation (Norwood 1982; Pigniolo 1992). These sources contain material with limited core size (Pigniolo 1992) and desert chert float material is limited in a similar manner, not even considering the high transportation costs of moving large cores of desert cherts into western San Diego County. The elimination of large core size requirements for most tools allowed an expanded use of Piedra de Lumbre chert in northern San Diego County and other cherts and desert materials elsewhere, creating a perceived, and perhaps real, increase in exchange.

Obsidian use was also affected by this tool size shift and by an apparent shift to the use to Obsidian Butte obsidian. The focus on smaller tools and arrow points in the Late Archaic allowed the use of smaller cores of material, reducing the transportation efforts and costs needed to bring appropriate cores long distances. The shift in use to Obsidian Butte obsidian is fairly well documented in Late Archaic assemblages in southern California, particularly those of southern San Diego County (Hughes and True 1985; Laylander and Christenson 1988). The increased use of this closer source also probably reduced transportation costs resulting in increased use during the Late Archaic.

Conclusion

It should be noted in all the discussions presented here that each of the material categories mentioned was available and used throughout all periods. Prehistoric people knew the landscape well and were not ignorant of, nor did they ignore, particular resources. Material use in western San Diego County

is related to availability first and foremost. Material availability dominates the patterns we see in the archaeological record with other factors such as production goal, core size, and material quality playing secondary roles leading to general trends in the archaeological assemblages of each period. Lithic scatters without diagnostic tools will only show some of the identified trends in use when compared to local resources. The changing emphases we see in material use are related to the technological and economic shifts that characterize the local adaptations made during the three broad scale periods of cultural change. The importance of these material use patterns is clear for they have shaped and misshaped our perceptions of the cultural stages and local movement and adaptation.

Much future research can focus on a reexamination of the Paleoindian and Early Archaic stages in western San Diego County based on this view. Breaking the links between environmental (lithic material) and cultural elements, it is time to look for a truly cultural typology. The relationship of exchange to these patterns, particularly in the Late Archaic, is also an important avenue of research. Examination of resource availability, technology, and production goal and their relationship to material can provide important keys for understanding the general stages of human occupation in western San Diego County.

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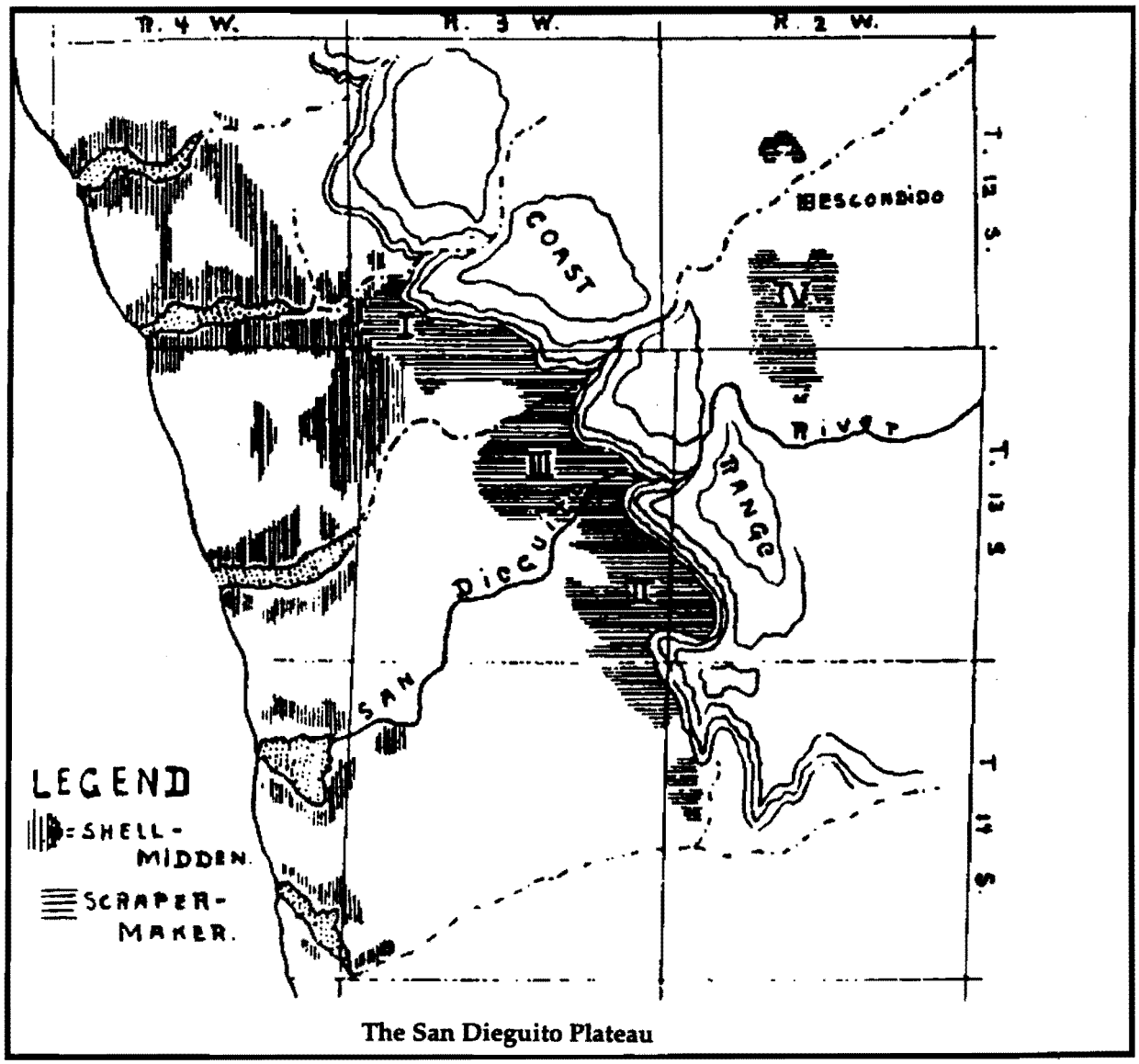

Figure 1. Rogers Distribution of Paleoindian (Scraper-Maker) and Early Archaic (Shell-Midden) Sites (after Rogers 1929).

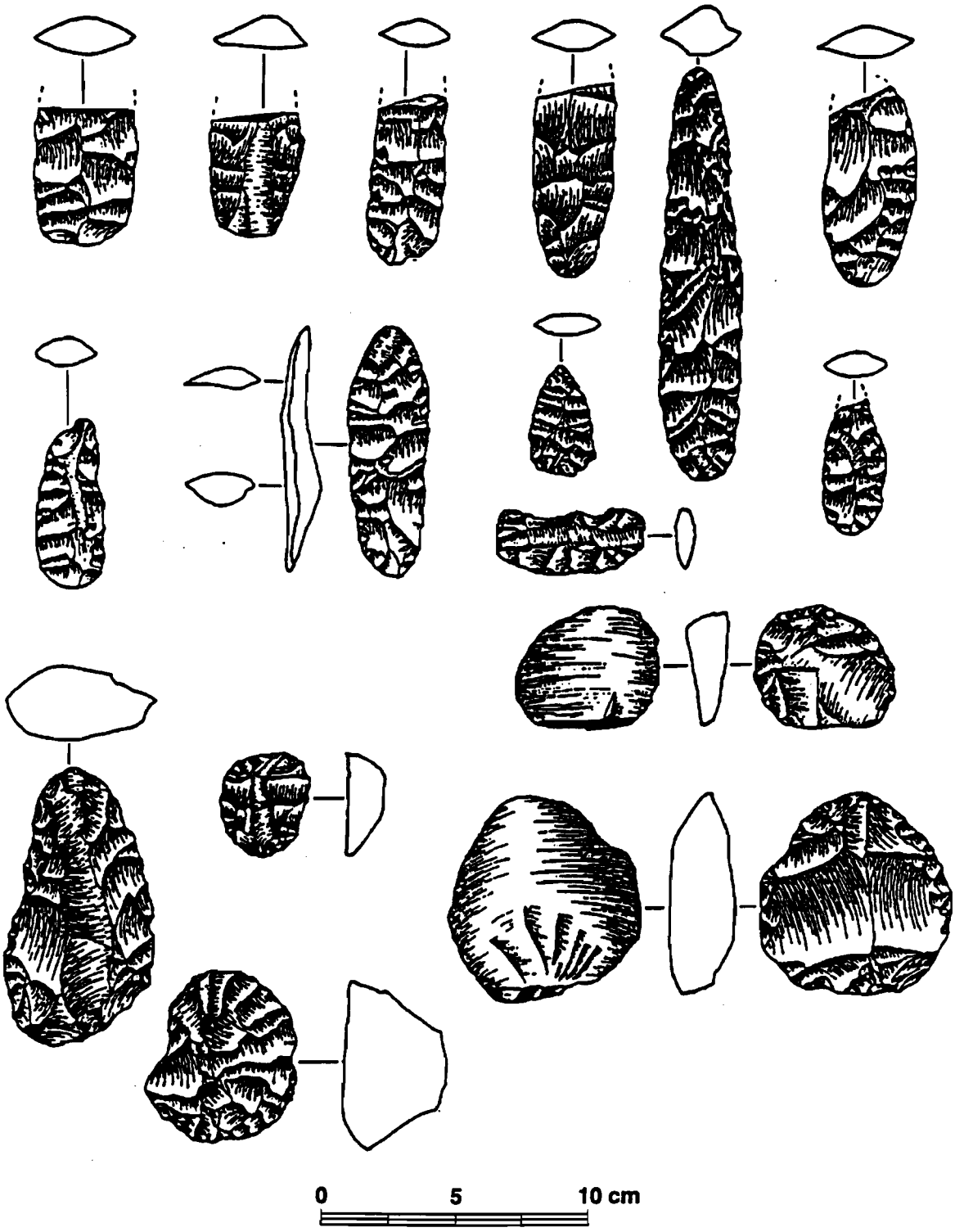

Figure 2. Initial Period San Dieguito: Typical Artifacts (source: Warren et al. 1993).

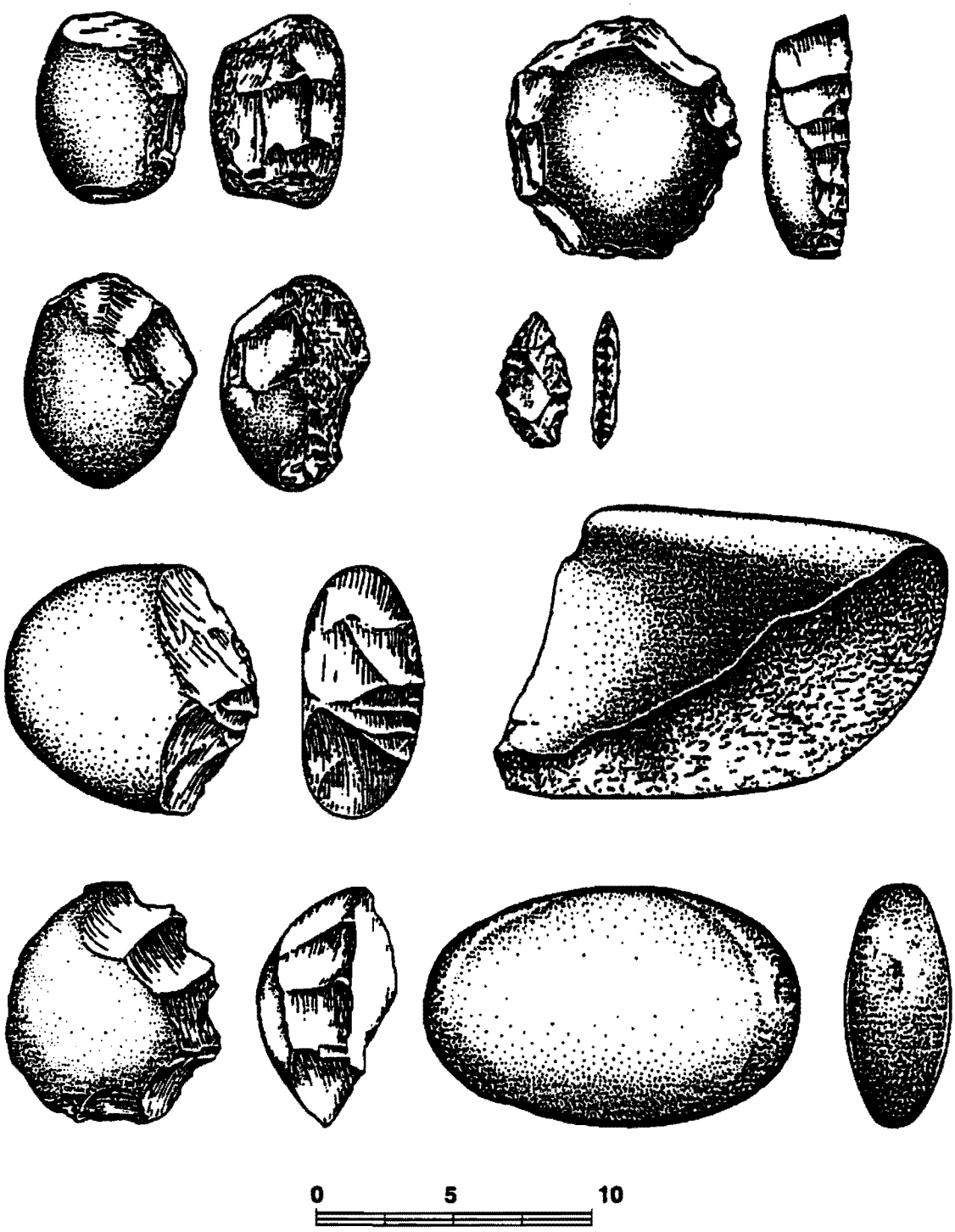

Figure 3. Initial Period La Jolla: Typical Artifacts (source: Warren et al. 1993).

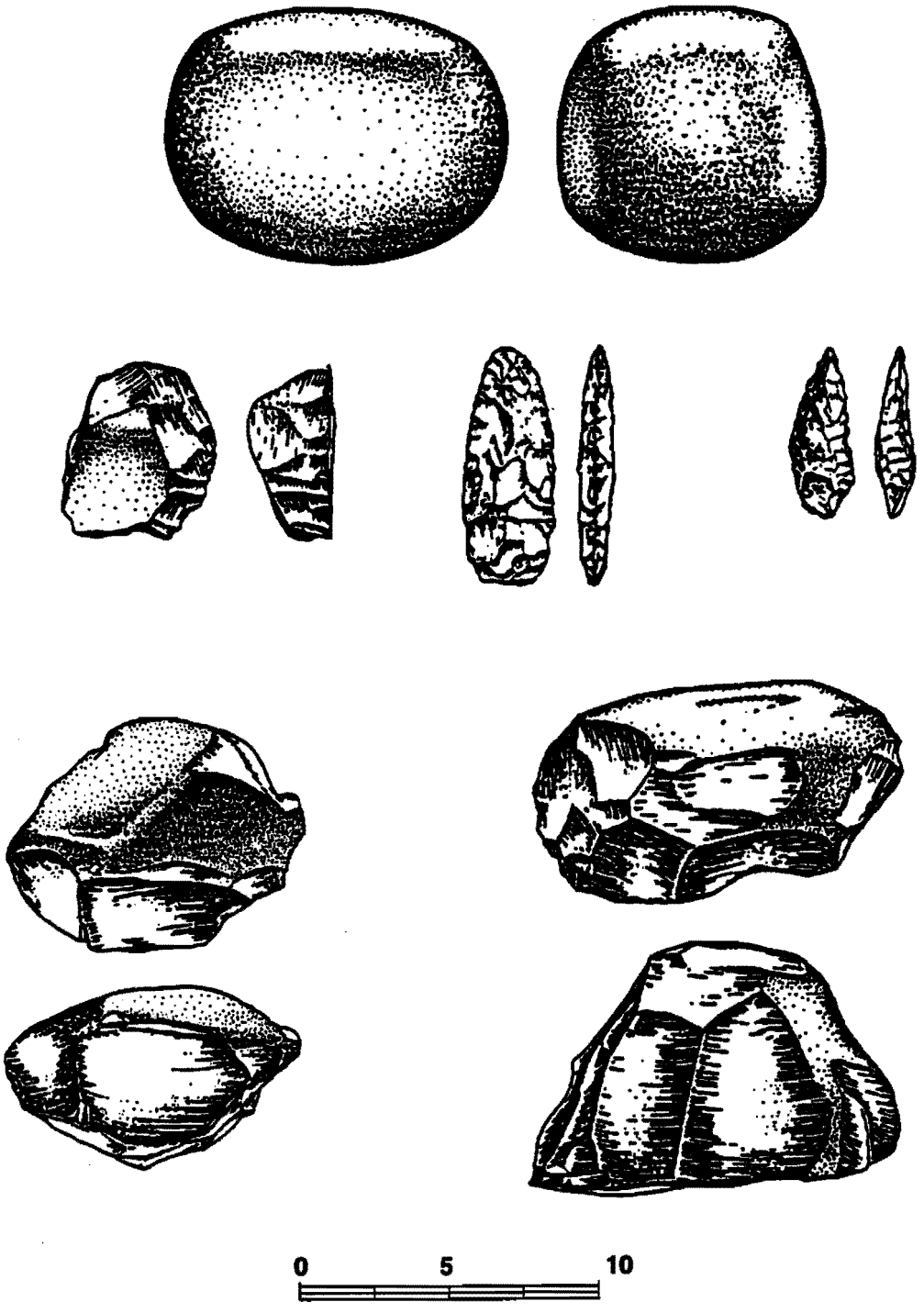

Figure 4. Transitional Period: Typical Artifacts (source: Warren et al. 1993).