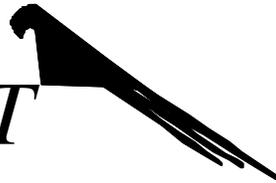


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In This Issue:

This issue is the second part of Volume 27, Nos. 3-4 which is dedicated to our dear friend and staunch supporter, Richard "Dick" Bice, who passed away in March of this year. Dick was one of the original team who worked at creating and supporting *Pottery Southwest* in the mid-1970's; his commitment and support continued throughout the rest of his life.

The feature article by Dick was published in 1975 as a guide for an exhibition mounted by the Museum of Albuquerque and the Albuquerque Archaeological Society. On the Shelf includes a description and order information about the recent tribute to Jane Kelley published by the New Mexico Archaeological Council as well as information on two CDs authored by Dick Bice available from the Albuquerque Archaeological Society.

Finally, we provide some technical tips on submissions. An electronic publication creates formatting challenges beyond those of conventional printing or photocopying. These tips make publishing in *Pottery Southwest* easier for our contributors. We hope you will take advantage of them and send in your submissions (see Page 29 for how-to).

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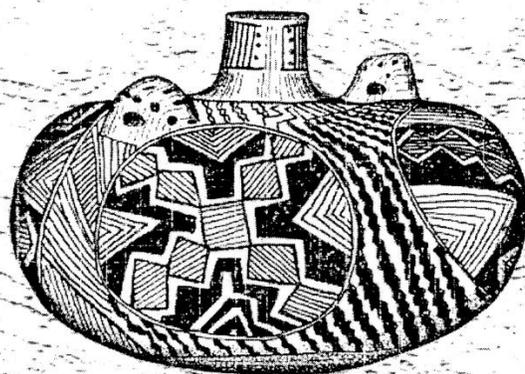
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Prehispanic Pueblo Pottery



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Published by the Albuquerque Archaeological Society

PREFACE

In 1975 the Museum of Albuquerque and the Albuquerque Archaeological Society prepared an exhibit featuring pottery made in the southwestern United States and northern Mexico, largely prior to the Spanish conquest. The principal objective of the exhibit was to display the artistry and craftsmanship of the prehistoric potters. The first edition of this booklet, *Prehispanic Pueblo Pottery* was prepared in order to provide a deeper appreciation of the exhibit,. It discussed the art, manufacturing techniques and interrelationships between the different pottery types and styles.

However, in addition to its use as an exhibit guide, the full photographic coverage of the vessels allowed the booklet to become an independent tool for understanding how pottery styles and designs evolved over time. Although the publication has been out-of-print for several years, continued interest in the booklet led the Albuquerque Archaeological Society Board to authorized the publication of a *Second Edition* containing a few editorial revisions and a larger format.

The text follows a theme of pottery *Family Tree* evolution defined by time, region and cultural ties. Although various versions of such trees have been espoused, full agreement has not been achieved. In fact, some archaeologists will argue that the use of biological evolutionary models such as *Family Trees* is inappropriate when considering pottery evolution. Nevertheless, this type of chart serves a useful purpose, and the example presented in the *Introduction* acts as a reference for text discussions.

The vessels displayed in the original exhibit were principally from the Museum's permanent collections, the collections of Frank and Francis Vernon, William and Dolores Sundt, Richard and Kitty Renwick, and the Maxwell Museum.

Members of the Albuquerque Archaeological Society aided the Museum Staff in the design and preparation of the exhibit. William M. Sundt coordinated the choice of the examples to be presented and identified the pottery types, while Tracy Green was responsible for the photography. Margaret F. Bice provided support in editing the manuscript.

Richard A. Bice

INTRODUCTION

One of the oldest inventions of mankind, and the first use of the science of chemistry, was the making of baked clay vessels and implements. Among the native peoples of America it became a remarkable medium of artistic expression. The more complex the culture, the more elaborate the pottery. Only peoples with an assured food supply and a highly organized society could afford the luxury of so much time and creative effort expended for combining the purely aesthetic with religious and functional purposes.

Fragile, but everlasting, baked clay remains intact for hundreds and thousands of years, even when buried under the most adverse conditions. For this reason it becomes a key element in the study of ancient cultures. Since it was an important article of trade it was used to establish trade connections. Pottery sherds accumulated in layers in refuse dumps give clues to the chronological sequence of, and changes in, prehistoric cultures. The characteristic styles, shapes, and modes of decoration, the clays and slips employed, reflect the taste of the times and the artistic temperament of the makers.

Unlike pottery from the Old World, American Indian pottery was made without the use of the potter's wheel. This apparent handicap was an artistic advantage. It allowed a more direct feeling for form and was less bound to the limitations of a mechanical device. The result was an art form more expressive and more subject to the creative impulse.

The motifs painted on the pots were produced as the result of abstract, symbolic or religious motivation. Original meanings, when present, were often lost as stylization and repetition transformed the motifs into geometric patterns or simple scrolls. Certain cultures, such as the Mimbres and Casas Grandes developed remarkable naturalistic and anecdotal styles depicting daily life and mythology.

A common artistic culture flourished in the American Southwest and Northern Mexico despite the many and diverse linguistic and ethnic divisions. Basing their studies upon the most minute changes in pottery styles, archaeologists have grouped the ancient inhabitants into three different branches, each with its own roots. One comprises the ancestors of the modern Pueblo Indians. It has been named Anasazi, meaning in Navajo the "ancient people". The second branch corresponds to the culture of the ancestors of the Pima and Papago Indians of southern Arizona and is called Hohokam - Pima for "ancient people". The third is the Mogollon which, in its Classic period blooms into the elegant Mimbres pottery style.

Each has its own character. The Anasazi is essentially a plateau culture; the Hohokam is of the desert; and the Mogollon belongs to the mountains. Each has successive periods which are classified according to location within the major river basins of the area. Since each period has a variety of pottery styles, each bearing a name, it makes Southwestern archaeology a complex science that only specialists fully understand.

For those who wish a simplified overview, we present the chart on the next page. However, an understanding of the archaeology is far from necessary for an enjoyment of the technical mastery and aesthetic sensitivities of these great, ancient artists of the Southwest.

This Introduction inspired by the writings of Miguel Covarrubias.

Suzanne de Borhegyi

PREHISPANIC POTTERY

In prehistoric times the ancestors of the present-day pueblo Indians occupied broad areas of central and western New Mexico and eastern Arizona. Additionally, they occupied much of the Colorado plateau in southern Colorado and Utah. This region of the American Southwest contains a number of different land forms and climates: There are cool high mesas with deep canyons, forested mountains, open rolling grasslands and hot semi-desert valley bottoms.

The different pueblos spotted throughout the region had much in common in that they lived a sedentary life that depended on agriculture for its basic support. On occasion the people were mobile, moving to new village sites from time to time and carrying on communication and trade over surprisingly long distances. However, the land, environmental variations and cultural evolutions helped produce many differences in life style and pottery art.

The principal time period portrayed by the pottery starts in about A.D. 500 and ends after Spanish settlements were well in place, or about A.D. 1600. Some pottery pieces of earlier or later dates have been included when appropriate. The examples of decorated pottery were made by pueblo groups from throughout the region.

Pottery types tended to originate and have centers of manufacture in specific river drainage basins although, with the everpresent communication and trade activities, examples of a given type might be found over much wider areas. The river basin approach is the tool that is used in this study to follow pueblo decorated pottery through its many forms of evolution.

The Introduction includes a *family tree* for types of pueblo pottery. The human ancestral paths of the modern Indian peoples named on the chart should not be assumed as necessarily having followed the same paths. The Pima-Papago and Hopi paths, although open to question seem reasonably well defined by pottery routes, but the Zuni and Acoma paths are far less well understood.

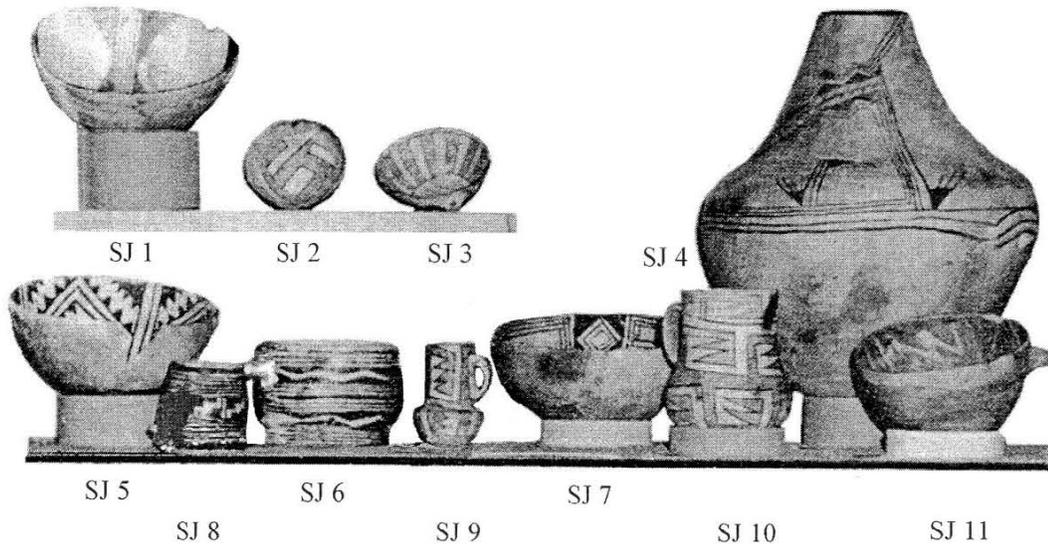
It should also be noted that the river basin method of organizing this discussion sometimes requires that pottery in the same family tree branch be followed from one basin to another as it developed through time.

THE SAN JUAN BASIN

Mesa Verde and Chaco Canyon are widely known for their pueblo ruins that represent high points in prehistoric architectural development. Other cultural factors including pottery had also evolved to a high level of achievement in usefulness and art form. The early pottery made by the Anasazi of this area was undecorated and unpolished. The Lino gray vessel (SJ 15) is an example. Vessels of this type were among the first made by the Basketmaker ancestors of the Pueblo Indians as early as A.D. 575.



With practice and experimentation, improvements were made in manufacturing techniques while aesthetic progress was made by applying designs to the vessel's surface. It was found that the cooked sap of the beeweed plant or tansy mustard, with or without powdered iron minerals, could be used in paint form to produce black decorations on the gray or white pottery. It was also found that finely ground white clay, applied to the surface as a slip improved the white color and texture of the vessels. Early pueblo pottery starting about A.D. 700 used some or all of these techniques. Examples are Kiatuthlanna* (SJ 5 and 17), Piedra (SJ 4) and Cortez (SJ 7). The early designs often featured thin, widely-spaced parallel lines in geometric shapes. Occasional full painting of limited areas and ticking with dots or short lines was also used.



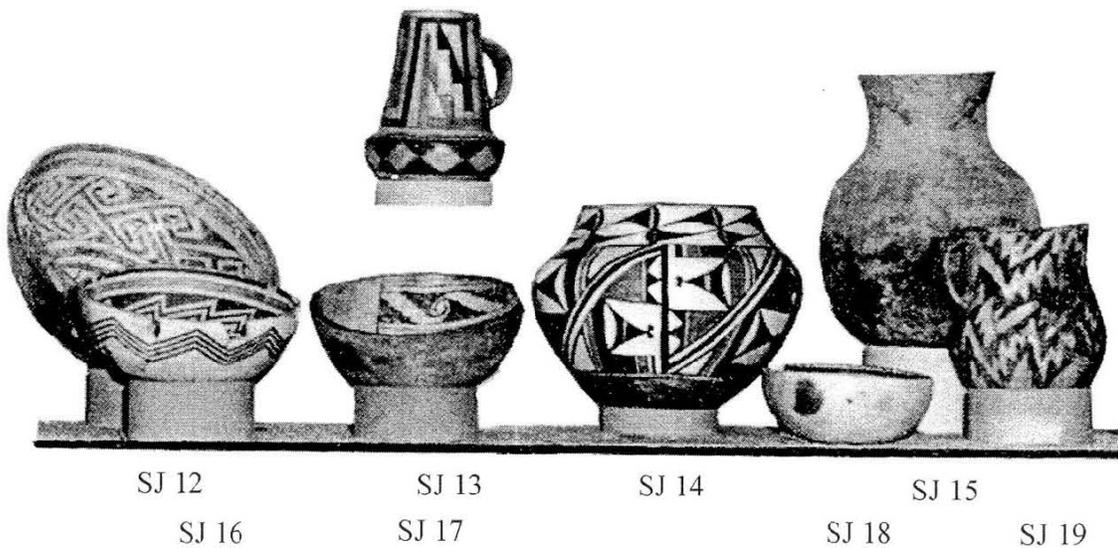
Later pottery, such as the Mancos and Escavada varieties (SJ 1 and 19) sometimes made use of heavy-stepped key elements or heavily filled-in areas. Other types, such as Puerco B/W (SJ 13), also discussed in the Little Colorado section, used opposed solid and hatched motifs. This was a time of experimentation (A.D. 900 to 1100), and many new ideas were being tried.

During the classic periods of Chaco and Mesa Verde (about A.D. 1000 and A.D. 1200 respectively), decorative artistry reached new highs as local variations in the surface finish or types of vessels continued to evolve. The Mesa Verde bowls (SJ 12 , 16 and 18) have typical features of Mesa Verde ware thick walls, polished surfaces, square ticked rims, geometric internal decorations, and multiple peripheral bands. By contrast the Chaco bowls (SJ 2 and SJ 3) typically have thinner walls, less polished hard white surfaces, tapered rims and thin-line hatching.

Another variation in style can be noted between the squat Mesa Verde mug and the associated McElmo mug (SJ 8 and 6) and the long-necked Chaco mugs or pitchers (SJ 9 and 10). Acoma pottery (SJ 14) is thought by some to be the modern day descendant of San Juan pottery.

Tusayan Polychrome (SJ 11) from the western San Juan will be discussed with pottery of the Little Colorado Basin.

*The type site is in the Little Colorado Basin, but the pottery is ancestral to both Chaco and Puerco types which cross the San Juan and Little Colorado Basin boundaries. See further discussion under Little Colorado.



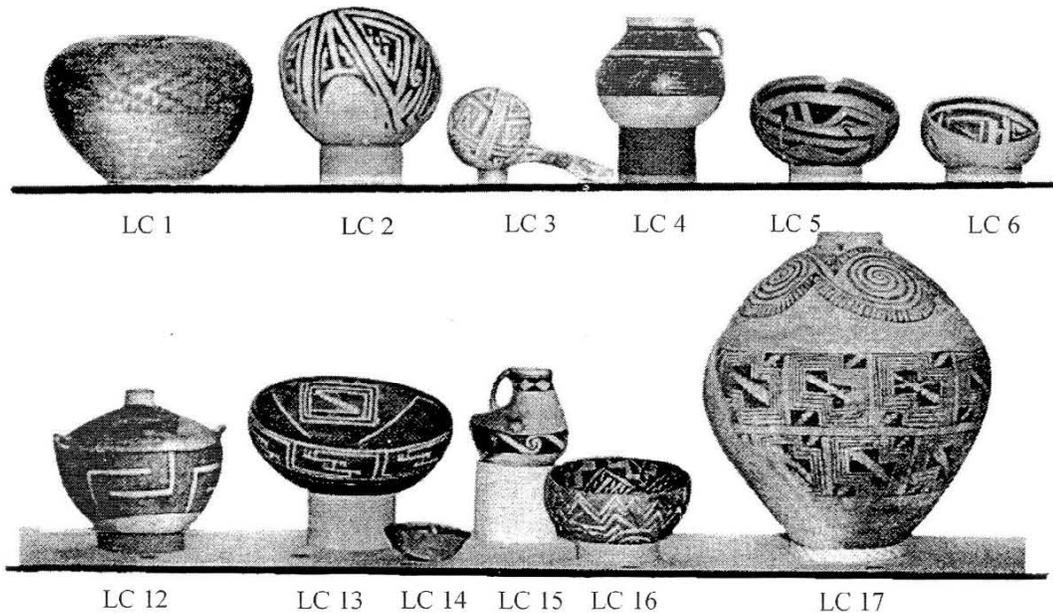
THE LITTLE COLORADO BASIN

The Little Colorado Basin was a melting pot that received and emanated pottery design influences from and to the surrounding areas. For example, the Hopi villages are in the Little Colorado drainage basin, but ancestral Hopi pottery was centered north of there in the Kayenta area on the tributaries of the San Juan River. Early types of this pottery have been found in the picturesque cliff dwellings of Betatakin and Kiet Siel located in the Navajo National Monument of northeast Arizona. These towns were occupied from about A.D. 1260 to A.D. 1290. Their abandonment was probably caused by the great drought of A.D. 1276-1290 that also affected Mesa Verde.



The pottery types leading to Hopi ware follow this general early sequence: Black Mesa B/W (LC 2) followed by Tusayan (SJ 11). Kayenta B/W (LC 4) and Kayenta Polychrome (not Shown) developed later and were followed by Jeddito varieties of Black-on-White and Black-on-Orange (LC 5, 7 and 8). The orange or orange-yellow color appears naturally as the result of firing the pottery in an open atmosphere where the oxygen from the air reaches the vessel surface. However, vessels fired in a reducing atmosphere where the pottery is shielded from the air and the fire consumes the oxygen, produced Bidihachi Black-on-White (LC 6).

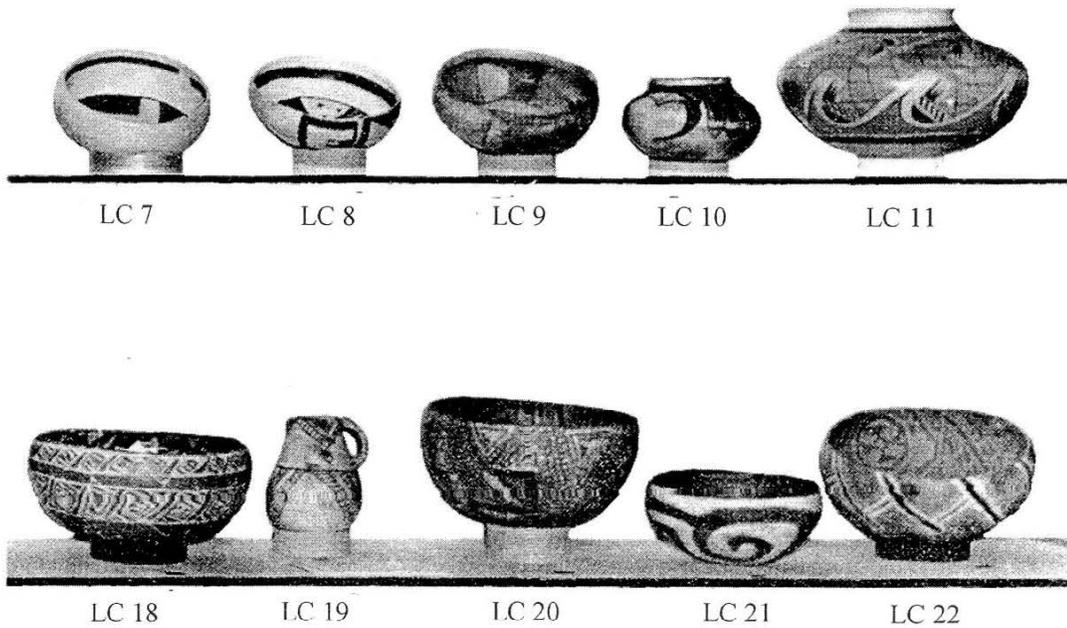
Sikyatki Polychrome (LC 9 and 10) came along somewhat later. It was first found in the excavation of ancestral Hopi visages by Fewkes in 1897. A Walpi woman by the name of Fannic Nampeyo, who was a skilled potter, noted the artistry of these ancient vessels and revived it in her works. She, or later, her descendants, have made modern versions since that time. An example is the modern Hopi jar (LC 11).



One of the main tributaries of the Little Colorado, the Rio Puerco of the west, starts at the Continental Divide some miles east of Gallup, New Mexico, and flows west to join the Little Colorado near Holbrook, Arizona. Several pottery types have derived their names from this sub-basin which saw developments ancestral to both its culture and that of adjoining basins. The Early Chaco Pitcher (LC 19) may be a late form of Kiatuthlana B/W design, shown in bowls (SJ 5 and 17). The style evolved to become Red Mesa B/W (LC 15 and 17) which dates earlier than A.D. 900. It displays the thin lines, solid dark areas, scrolls and ticked embellishments of other early decorated B/W pottery. The name comes from the red sandstone bluffs east of Gallup, but the type was widely distributed over adjoining parts of the Little Colorado, San Juan and Rio Grande basins. In the Chaco Canyon region, it was followed by Escavada B/W (SJ 19) and Chaco B/W (See earlier San Juan section). In the Puerco area, it was followed by Gallup B/W (LC 12), Puerco B/W (LC 14 and SJ 13), Puerco B/R (LC 1) and other types such as Cebolleta B/W (LC 3) and Wingate Polychrome (LC 21).

Of this group, the Black-on-Red and the polychrome vessels are classified as White Mountain Redware, showing a strong resemblance to pottery of that group which bear the names of towns further south near the head waters of the Little Colorado, namely St Johns and Springerville, Arizona (LC 18, 20 and 22). The polychrome form of these types consists of red vessels (usually bowls) with black and white decorations. They display a very high level of artistic skill often using elaborate stepped and spiral designs with cross-hatched elements. These same decorative features appear on Tularosa B/W discussed in the Upper Gila section. The two areas are in close proximity and both types were doubtless shared by the same peoples.

St Johns polychrome was probably the most widely traded of all pottery types, appearing throughout most of the pueblo country that was occupied between A.D. 1200 and A.D. 1300. Later examples feature applications of the black mineral paint approaching glaze paint in texture. It is thought that the glaze paints of the Rio Grande Basin probably originated in St Johns technology, and perhaps from pottery in the Zuni area.



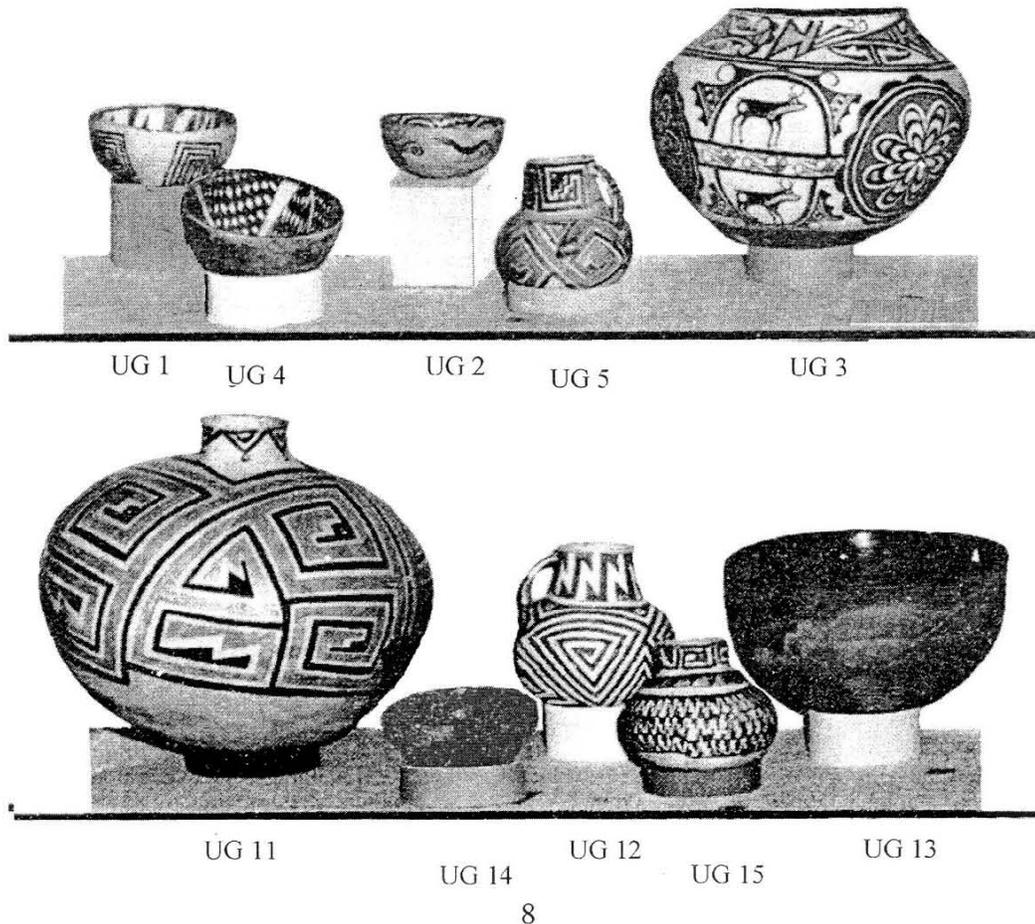
THE UPPER GILA BASIN

This basin in southwestern New Mexico is mostly pinon and juniper highlands with mountains and rolling hills. Two types of ceramics, Reserve and Tularosa, make up much of the indigenously made pottery. The names reflect the Tularosa River and the town of Reserve.

The flow chart in the *Introduction* shows Reserve and Tularosa as part of the Cibola branch of the Little Colorado stem. However, early Mogollon influence was felt in both the Cibola and Salado branches. Alma Plain (shown on the Mogollon-Mimbres Branch, but not illustrated) may well have been ancestral to Reserve smudged ware, which, with Reserve B/W appeared about A.D. 940. Reserve B/W evolved into Tularosa B/W by about A.D. 1100.



Reserve smudged ware demonstrates some interesting features of pottery making techniques. Pueblo pots were typically made by rolling the clay into long ropes and coiling it onto itself to form the vessel's walls. In most of the decorated vessels, the coils were obliterated and a smooth surface prepared using smoothing



stones after scraping with worked sherds or gourd rinds. In the case of unpainted ware the coils were sometimes left unobliterated and pinched or incised to form a decorated relief. This or a similar treatment was used around the necks of the Reserve Smudged bowls (UG 13 and 14).

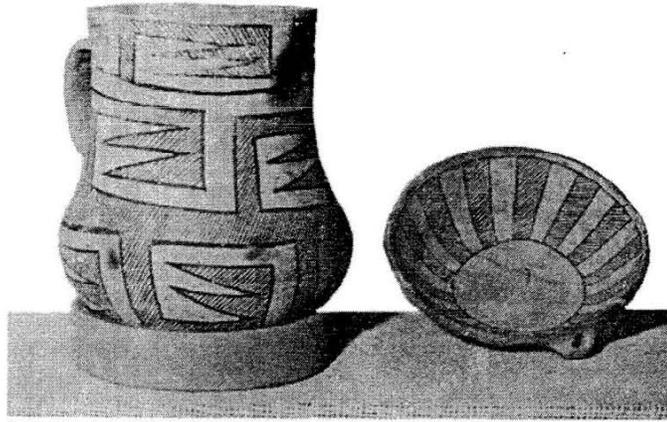
The shiny black interior was produced by polishing the surface and subjecting it to a prolonged exposure of smoke. The essence of this technique is used by the modern Santa Clara potters to produce the polished black pottery for which that pueblo is famous.

The Reserve B/W ware (UG 12, 16 and 17) has much the same vessel form as the Tularosa ware that makes up the bulk of this exhibit. For example pitchers typically have globular bases, tapered moderately-long necks and either strap or animal effigy handles. The most obvious difference is in the painted design. Reserve B/W tends to have broader, heavier lines that give an appearance of high contrast between the black and white. Tularosa B/W, with its fine hatched lines, appears more gray from a distance. However, it should be noted that the change from one to the other was probably evolutionary and not a distinct step.

The Zuni people speak a language whose origins are not well understood. While not considered to be descendants of the Mogollon, their pottery (UG 3), may reflect some Tularosa-St Johns influence.

Snowflake (UG 1), although it appears in the Upper Gila (and in the upper Little Colorado as well), is ancestral to some pottery in the Lower Gila and will be discussed in that section.

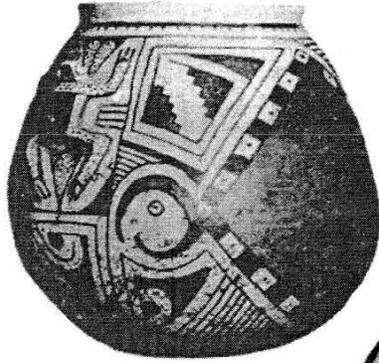




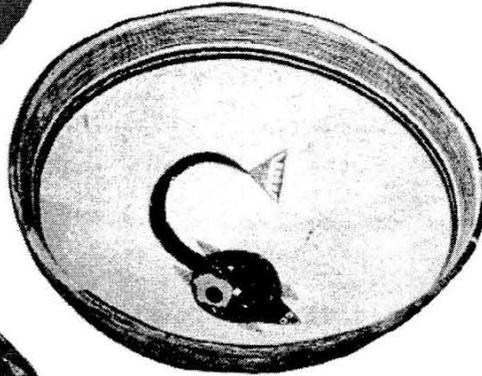
Chaco Mug and Bowl



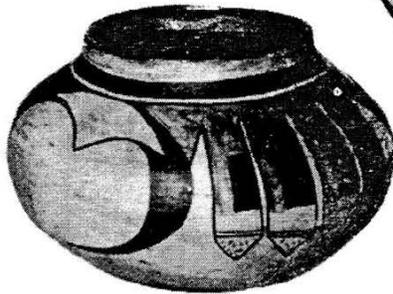
Tularosa Jar



Casas Grandes Jar



Mimbres Bowl



Sikyatki Jar



St Johns Bowl

THE MIMBRES BASIN

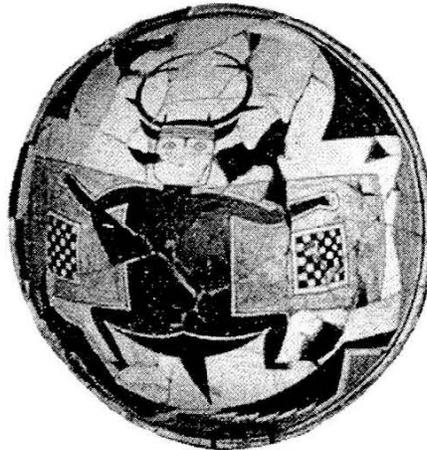
The Mimbres people were a somewhat isolated culture centered in the river valley of that name in southern New Mexico. The short-lived Mimbres river flows south through cottonwood-lined fields and disappears into the desert sands. The origins and fate of the culture continue to be shrouded in debate although it appears that the Mimbrenos were of Mogollon derivation and that some of their design influences may have been felt later in the Casas Grandes area of northern Mexico.



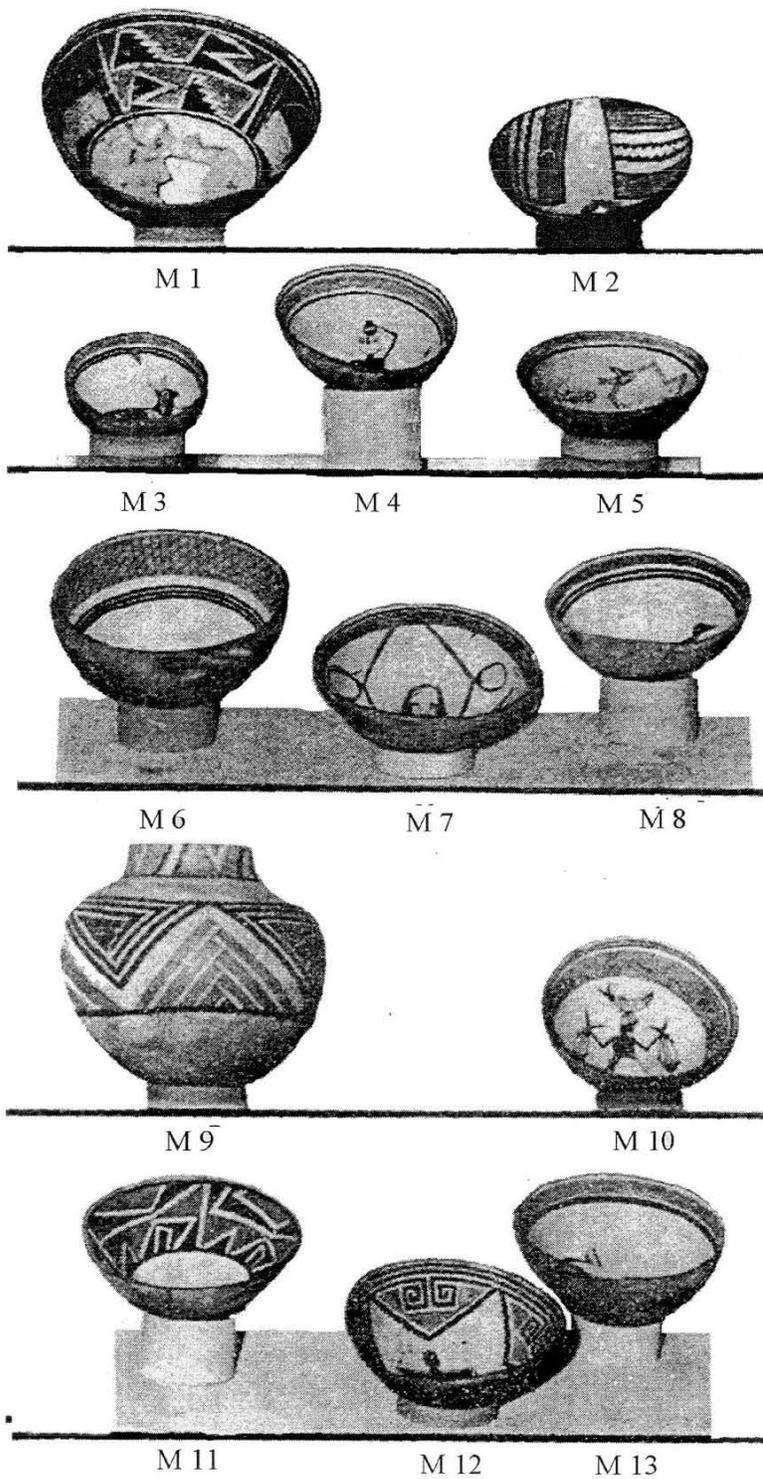
The Mimbres potters are noted for their excellent and imaginative execution of designs on the insides of bowls. The designs were normally painted with black mineral paint on hard white-slipped surfaces and were usually fired in a reducing (no oxygen) atmosphere that resulted in a Black-on-White vessel. When some vessels were fired in oxidizing atmospheres (exposed to the air), either by accident or by intent, the result was Red-on-White or Red-on-Cream.

The earliest of the Mimbres pottery is the Bold-face of which M 2 is an example. This type persisted from about A.D. 750 to perhaps A.D. 900. It displays coarser crosshatching and more open space between elements than do the later types of vessels with geometric designs such as M 1 and M 12. The classic style of design, shown by all the vessels except M 2 was produced for about 200 years, starting perhaps as early as A.D. 900.

The variety and nature of the life forms depicted in the bottoms of bowls demonstrates that the potters not only had an intimate and broad knowledge of living creatures but also could produce great art, sometimes humorous, by their methods of stylization and embellishment. For their inspiration they chose humans, birds, animals and aquatic creatures of the region. Some students of Mimbres art believe that they can identify pictures of fish that could only be found in the sea. This demonstrates knowledge of the Gulf of California, some 350 miles away. Most Mimbres bowls that were found in burials have a hole punched in the bottom to release the spirit into the after-world.



M 11



THE LOWER GILA BASIN

The Lower Gila Basin is generally characterized as open, sometimes broken semi-desert country. It has the climate of Phoenix with mild winters and hot summers. The rivers flowing from mountains to the east and northeast provide much water for irrigation.

The predominant pottery of this area was made by two cultures, the Hohokam and the Salado peoples who apparently lived side by side during some phases of their development.



The Hohokam culture developed in the lower river valleys. Substantial information concerning their lives and material possessions was derived through the excavation of Snaketown which is located in the valley south of Phoenix. Two pieces of fairly early Hohokam pottery, Sacaton Red-on-Buff (LC 3 and 4) are shown in this exhibit. They date about A.D. 900 to A.D. 1100. The clay is somewhat coarse, and although the mineral paint was applied over a light slip, the final result is a porous-appearing surface with little contrast. The pottery was made by the coil method, but was smoothed by use of the paddle and anvil. A stone or wooden anvil was held on the inside of the vessel while a wooden paddle was used to shape the outside. This method differed from that used in the pueblos to the east, where the smoothing and shaping was done by pinching the coils together and smoothing the outside with strokes of scraping and rubbing tools, while the vessel wall was supported by a hand on the inside.

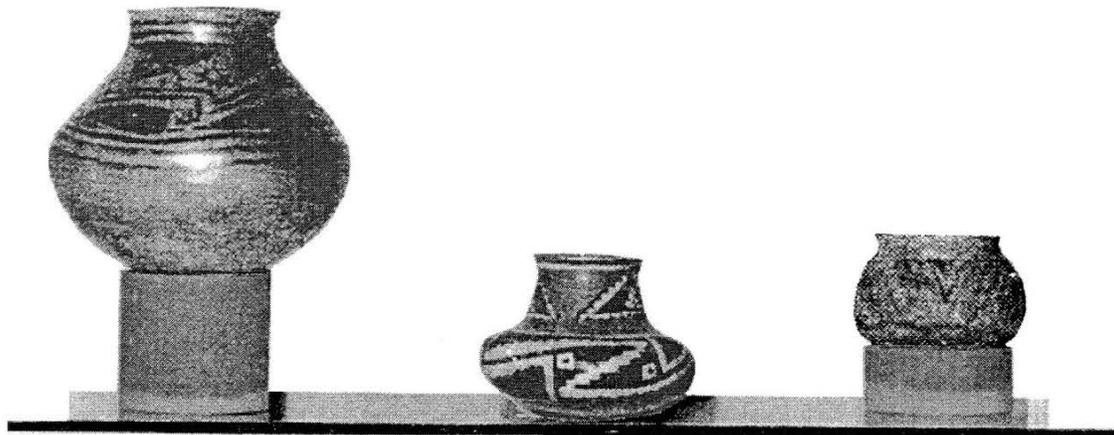
The San Carlos Red-on-Brown jar (LG 7) is later in the Hohokam sequence (A.D. 1265-1300). It has a black smudged interior surface and a slightly polished exterior surface decorated with mineral paint. A reducing atmosphere was used in firing the vessel.

The jar contains funeral ashes. Cremation was practiced by the Hohokam in contrast to inhumation used by most of the pueblos in New Mexico and eastern Arizona.

Another type of Hohokam pottery, Gila Red, is illustrated by the Jar (LG 9). This is a polished vessel with a bright red slip. Firing clouds (smoked areas) often marred the uniformity of the finish. It is thought that this type of pottery originated in the Flagstaff area among the Sinagua peoples. It was made in the Hohokam area about A.D. 1300.

The Babicomari Jar (LG 1) was made by some later peoples who occupied the hills above the Hohokam valley area. Their affiliation is uncertain but they lived there after the abandonment of the Hohokam towns. This Jar also contains human ashes suggesting a continuation of some aspects of the Hohokam culture.

The Salado branch in eastern Arizona and west-central New Mexico seems to have combined some design elements of the Anasazi and Mogollon as can be seen in the pottery. An early variety is Snowflake B/W (UG 1, Upper Gila group). It is found in the upper reaches of the Gila and Little Colorado dating between A.D. 1100 and A.D. 1200. This example had the ticked rim of some of the San Juan Anasazi pottery of about the same period. The other two examples of Salado ware are the Pinto Polychrome bowl (LG 5) and the Tonto Polychrome jar (LG 2). These are thought to be late derivations of the St Johns family, lasting into the late A.D. 1300's. (The St Johns group is otherwise known as White Mountain Redware.) The Pinto vessels suffered from a dullness in color while the Tonto vessels were flamboyant with black and red colors painted over a white slip



LG 1

LG 2

LG 3



LG 4

LG 5

LG 6

LG 7

THE CHIHUAHUA BASIN

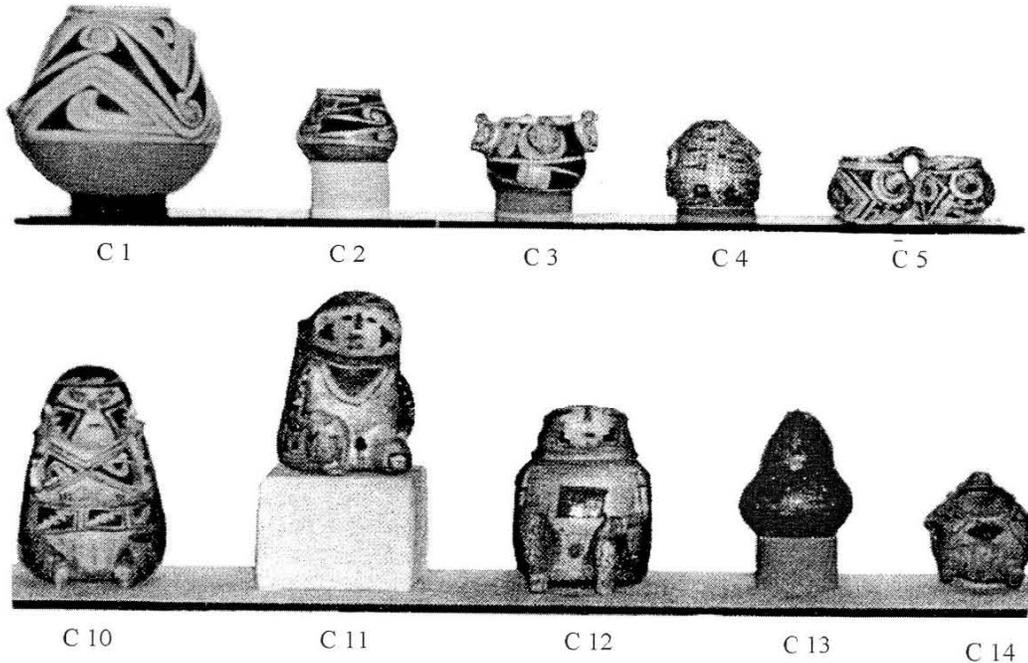
The name Casas Grandes* is synonymous in many minds with the beautiful buff colored polychrome pottery that was made in northern Mexico in prehistoric times. The ruins which gave the pottery its name are in a landlocked basin seventy-five miles south of the New Mexico border in the State of Chihuahua, Mexico. The ruin structures have some of the characteristics of Hohokam ruins in Arizona in that many of the walls, three to four feet thick, were made of puddled adobe placed in forms about five feet long and two feet high. Ruins in both areas exhibit a Mexican characteristic in their ball courts. Casas Grandes also has pyramidal platforms suggestive of others found in central Mexico.



It is thought that Casas Grandes was a trading center through which seashells from the Gulf of California and the Pacific Coast, as well as macaws from the jungles, were traded to pueblos in the north.

As in all cultures, Casas Grandes pottery went through several stages of development. The early stages seem to have been influenced by Mogollon traits in which brown or red finishes were common. The earliest type illustrated (ca. A.D. 1100) is represented by the Playas Red effigy bowl and jar (C6 and 16).

* The name *Casas Grandes* should not be mistaken for a Hohokam ruin of a similar name *Casa Grande* near Phoenix, Arizona.



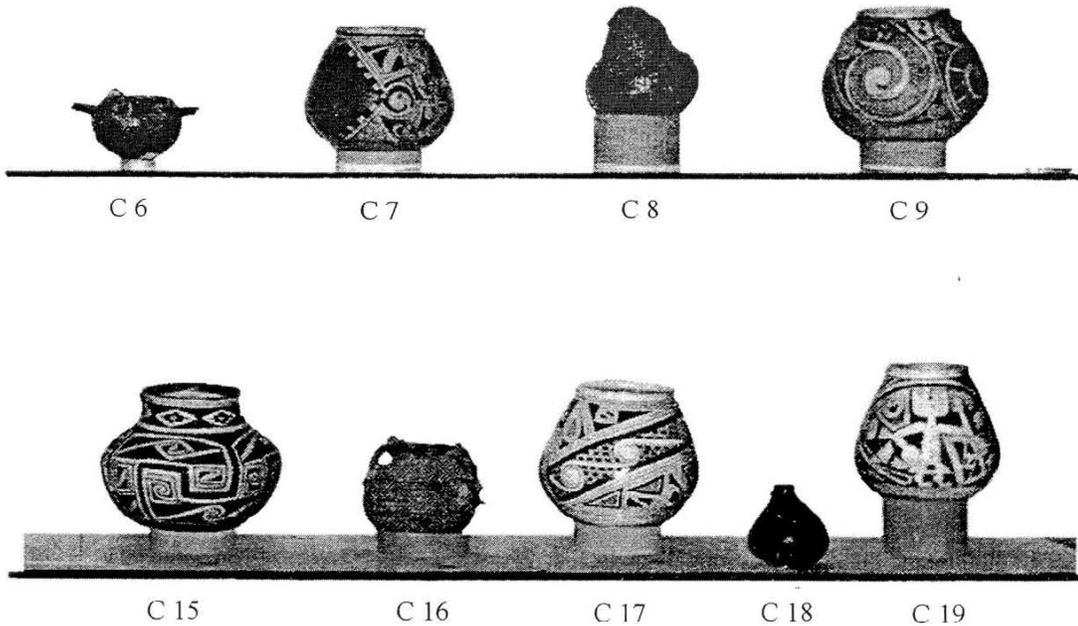
The bowl represents a winged bird while the jar has life-form handles and is decorated with pinched corrugations around the top. Neither is painted, but the bowl is polished, an inconsistent characteristic of this type.

Madera Black-on-Red followed the Playas Red by a few decades. There are four examples (C4 ,8, 13 and 18). All except the last are effigy jars. They represent a step in pottery evolution in which black paint was applied to the red surface and the vessels were polished after decoration.

The peak in this evolutionary process was reached as Babicora Polychrome (C2) and then Ramos Polychrome came into being in the mid A.D. 1300's. Babicora is normally more dull than Ramos and seldom has painted life figures or molded effigy figures added to the jars.

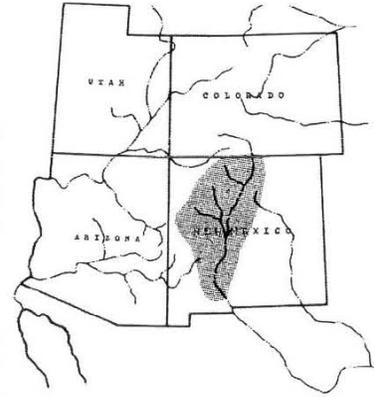
Ramos is a classic in prehistoric pottery. It is thought by some to have been the inheritor of the remarkable Mimbres tradition, but with a liberal dose of Mexican influence added to the recipe. The ivory colored background and the bright scarlet or maroon and black decorations provide a pleasing combination. Stylized geometric and life-form painted designs embellish some of the jars (C 1, 17 and 19). Similar jars (C 7 and 9) combine painted designs with raised figures on the surface while C 3 has four small bird sculptures attached just below the rim. C 5 is a double vessel sometimes called a marriage jar. Human effigy jars (C 10, 11, 12 and 14) combine sculptured forms with painted designs utilizing some of the stylized elements featured on the regular jars. The jar C 15 is different in design style from the remainder of the Ramos types.

Much work is going on in northern Mexico to clarify the relationships between that region and the adjacent cultures in the southwestern United States. National boundaries, of course, did not exist at this period in prehistory.



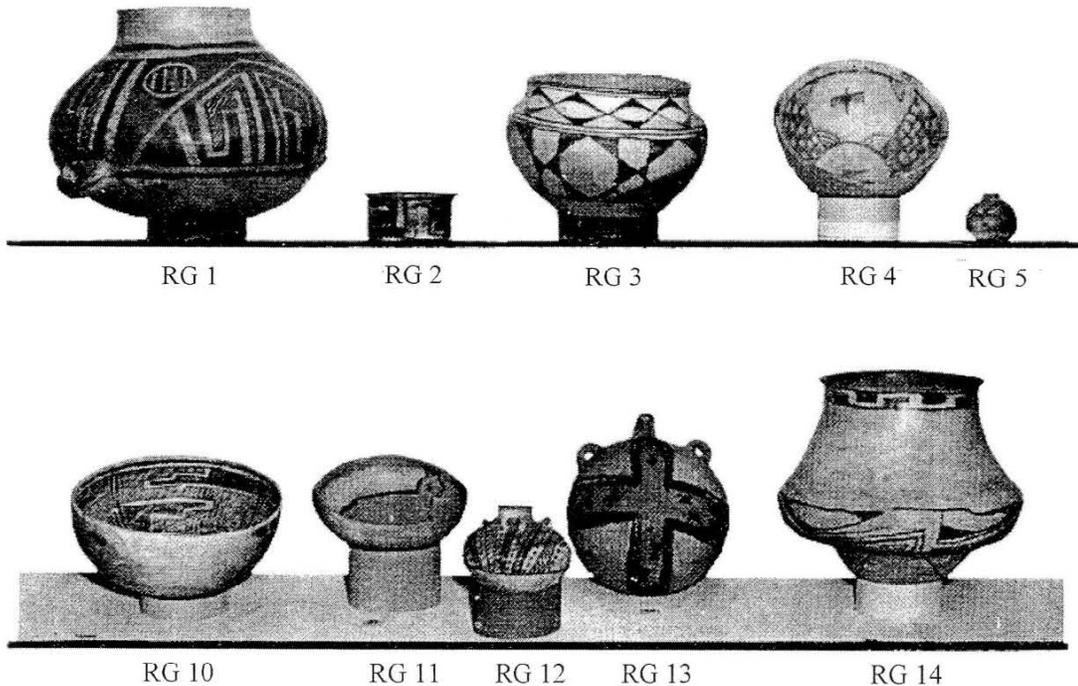
THE RIO GRANDE BASIN

The Rio Grande Basin has been occupied by Native Americans from paleo-indian times of about 12000 B.C. to the present. However the establishment of large pueblos in this basin came about late in the pueblo development sequence or about A.D. 1200-1300. It followed the abandonment of the San Juan Anasazi and Mogollon areas.



The Chaco Canyon was largely abandoned by A.D. 1100, and the Mesa Verde area by A.D. 1290. Some people migrated toward the Rio Grande Basin by various paths, gaining access to the area by crossing the Continental Divide between the headwaters of the San Juan and the Chama rivers, or by following the Chacra Mesa into the valley of the Rio Puerco of the East. Some people may have come up the Rio Grande from the south while others may have followed the San Jose east into the Rio Puerco and Rio Grande valleys. By whatever route they came, they took up residence among the existing peoples who had occupied the area for millennia. Eventually large towns and villages were established along the Rio Grande or its tributaries where uncertainties in water supply were largely eliminated and where food crops could be assured.

One of the types of pottery, made both before and after the influx of people, is Gallina Black-on-White (RG 5, 8, 12 and 16). The makers of this pottery were the peoples of the western and northern periphery of the

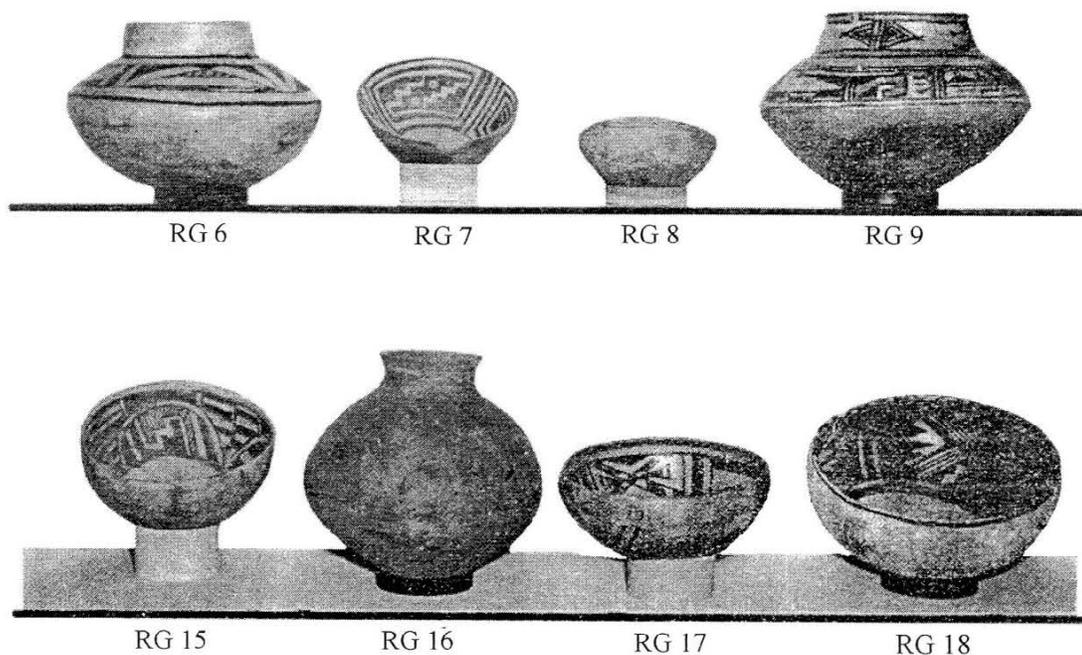


Jemez Mountains who built what were apparently defensive towers. There is much evidence of violent death among these people due to internecine raids, probably during periods of local drought. Another type of Black-on-White pottery, made while the influx was under way, is Vallecitos Black-on-White (RG 1 and 15). Its makers lived in the valleys around the southern reaches of the Jemez Mountains. It displays the use of large bold black elements in balance with contrasting areas left open or hatched, illustrating the evolution of the earlier more finely detailed styles into a heavier later style.

With the influx into the Rio Grande Basin, several pottery traditions met, and new types of pottery came into existence. In the northern part of the basin, perhaps centered on the Chama river, types called Biscuitware A and B were developed. This pottery is decorated in black on a gray to light tan surface, and was made with thick walls using a fine lightweight paste. The triangular "head" with "feathers" shown on the inside of the bowl (RG 18) was a favorite motif used in various arrangements on many bowls.

Tsankawii Black-on-Cream (RG 14) is a related type, probably derived in part from experience in making Biscuit ware. It takes its name from a ruin on the Pajarito Plateau of the Jemez Mountains eastern flank. The general shape of this Jar with its indented bottom (formed to be carried on the head?) persisted into at least the 1700's of historic times at such Tewa pueblos as Pojuaque and San Ildefonso.

Some of the evidence of migration into the Rio Grande valley from Chaco and Mesa Verde rests in similarity of pottery types. The Galisteo Basin located at the headwaters of the Galisteo Creek which flows into the Rio Grande from the east, contained several large flourishing pueblos at the time of the Spanish conquest. These were later abandoned, fell into ruins, and were test-excavated in the early 1900's. The earliest type

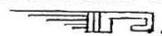


of pottery found there, Galisteo B/W (RG 4 and 10) bears a distinct resemblance to the varieties of McElmo pottery found at Mesa Verde. It has long been speculated that some San Juan migrants helped found these pueblos, but the matter has never been fully settled. The final type of Black-on-White pottery in this group is Socorro B/W (RG 7). It seems likely that the designs reflect Magollon area influences, coming from the south into traditions stemming from the Chaco and Puerco areas.

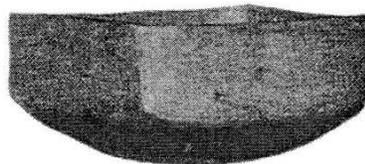
Now let us turn to Rio Grande Glazeware. Kidder in his excavations at Pecos ruin (1915-1922) defined a series starting with Glaze I and ending with Glaze VI. The earliest Glazeware was made in the Rio Grande Basin about A.D. 1300, continuing in vogue until the late 1600's which was well into the period of Spanish settlements. By this time it had evolved into a runny decorative medium, characteristic of that late era.

The glaze paint was used only for decoration, and not for full coverage to water proof vessels. The secret of the glaze was the addition of lead ore (galena) to the mineral pigments that had traditionally been used in many areas. Its infusion into the central Rio Grande valley is not entirely clear, but two influences were present. A glaze paint was used during two periods at Zuni, A.D. 1300 to A.D. 1475 and A.D. 1630 to A.D. 1680. During the earlier Zuni period, vessel shapes similar to the Rio Grande ollas (jars) were used. The other glaze or semi-glaze influence came from late versions of the St Johns wares which seems likely to have been ancestral to both the Zuni and Rio Grande versions.

Recent archaeological investigations indicate that some of the lead for the Rio Grande Glazeware was mined from the hills above Cerrillos, New Mexico, near the ancient turquoise mines. Other possible sources are known to have existed in the Sandia and Manzano Mountains.

Samples of two varieties of Glaze I ware are shown; a San Clemente Glaze-on-Red bowl (RG 17) and Cieneguilla Glaze-on-Yellow Jar (RG 6). These are early in the series before polychromes had developed. They can be compared with later jars in which red decorations and red-to-orange base slips were added. RG 20 is probably a transitional Glaze III to Glaze IV vessel while RG 9 and RG 21 are mature Glaze IV ollas. Both of these latter Jars have *stylized bird motifs* in the following general form . Other Glaze IV vessels are bowls (RG 2 and RG 11) and a canteen for holding water (RG 13). The plain yellow square bowl (RG 19) is thought to have been contemporaneous with the Glaze IV wares, but may show Spanish influence and be later.

RG 3 is a modern Santo Domingo Jar, using matte paints that came into use following the demise of Glazeware in the 1600's



RG 19



RG 20.



RG 21

POTTERY LISTINGS BY BASIN

SAN JUAN BASIN

- SJ 1. Mancos B/W Bowl
2. Classic Chaco B/W Bowl
3. Classic Chaco B/W Bowl
4. Piedra B/W Jar
5. Kiatuthlana B/W Bowl (Early)
6. McElmo B/W Mug
7. Cortez B/W Bowl
8. Mesa Verde B/W Mug
9. Classic Chaco B/W Mug
10. Classic Chaco B/W Mug
11. Tusayan Polychrome Bowl
12. Classic Mesa Verde B/W Bowl
13. Puerco B/W Mug
14. Modern Acoma Polychrome Bowl
15. Lino Plain Jar
16. Classic Mesa Verde B/W Bowl
17. Kiatuthlana B/W Bowl
18. Classic Mesa Verde B/W Bowl
19. Escavada B/W Pitcher

LITTLE COLORADO BASIN

- LC 1. Puerco B/R Jar
2. Black Mesa B/W Bowl
3. Cebolleta B/W Ladle
4. Kayenta B/W Mug
5. Jeddito B/Orange Bowl
6. Bidihachi, B/W Bowl
7. Jeddito B/Orange Bowl
8. Jeddito B/W Bowl
9. Sikyatki Polychrome Bowl
10. Sikyatki Polychrome Jar
11. Modern Hopi Polychrome Jar
12. Gallup B/W Jar
13. Four Mile Polychrome bowl
14. Puerco B/W Bowl
15. Red Mesa B/W Effigy
16. St. Johns Polychrome Bowl
17. Red Mesa B/W Jar
18. St. Johns Polychrome Bowl
19. Early Chaco B/W Pitcher
20. St. Johns Polychrome Bowl
21. Wingate Polychrome Bowl
22. Springerville Polychrome Bowl

UPPER GILA BASIN

- UG 1. Snowflake B/W Bowl
2. Tularosa B/W Bowl
3. Modern Zuni B/W Jar
4. Tularosa B/W Bowl
5. Tularosa B/W Pitcher
6. Tularosa B/W Pitcher
7. Tularosa B/W Jar
8. Tularosa B/W Pitcher
9. Tularosa B/W Effigy Jar
10. Tularosa B/W Pitcher
11. Tularosa B/W Jar
12. Reserve B/W Pitcher
13. Reserve Smudged Bowl
14. Reserve Smudged Bowl
15. Tularosa B/W Jar
16. Reserve B/W Pitcher
17. Reserve U/W Jar
18. Tularosa B/W Pitcher
19. Tularosa B/W Hanging Jar
20. Tularosa B/W Effigy Jar

MIMBRES BASIN

- M 1. Mimbres B/W Bowl
2. Mimbres B/W Bowl
3. Mimbres R/W Bowl
4. Mimbres B/W Bowl
5. Mimbres B or R/W Bowl
6. Mimbres B/W Bowl
7. Mimbres B/W Bowl
8. Mimbres B/W Bowl
9. Mimbres B/W Jar
10. Mimbres B/W Bowl
11. Mimbres Polychrome Bowl
12. Mimbres B/W Bowl
13. Mimbres B/W Bowl
14. Mimbres B/W Bowl

LOWER GILA BASIN

- LG 1. Babicomari B/R Jar
2. Tonto Polychrome Jar
3. Sacaton R/Buf Jar
4. Sacaton R/Buf Dish
5. Pinto Polychrome Bowl
6. Gila Red Jar
7. San Carlos R/Brown Jar

CHIHUAHUA BASIN

- C 1. Ramos Polychrome Jar
2. Babicora Polychrome Jar
3. Ramos Polychrome Effigy Jar
4. Madeira B/R Effigy Jar
5. Ramos P. Effigy Double Jar
6. Playas Red Effigy Bowl
7. Ramos Polychrome Effigy Jar
8. Madeira B/R Effigy Jar
9. Ramos Polychrome Effigy Jar
10. Ramos Polychrome Effigy Jar
11. Ramos Polychrome Effigy Jar
12. Ramos Polychrome Effigy
13. Madeira B/R Effigy Jar
14. Ramos Polychrome Effigy Jar
15. Ramos Polychrome Jar ?
16. Playas Red Effigy Jar
17. Ramos Polychrome Jar
18. Madeira B/R Jar
19. Ramos Polychrome Jar

R10 GRANDE BASIN

- RG 1. Vallecitos B/W Jar
2. Rio Grande Glaze IV Bowl
3. Modern Rio Grande Bowl (Santo Domingo)
4. Galisteo B/W Bowl
5. Gallina B/W Jar
6. Cieneguilla Glaze I Yellow Jar
7. Socorro B/W bowl
8. Gallina B/W Bowl
9. Rio Grande Glaze IV Jar
10. Galisteo B/W Bowl
11. Rio Grande Glaze IV Bowl
12. Gallina B/W Jar
13. Rio Grande Glaze IV Canteen
14. Tsankawii B/W Jar
15. Vallecitos B/W Bow I
16. Gallina B/W Jar
17. San Clemente Glaze I R. Bowl
18. Biscuitware B/W Bowl
19. Rio Grande Plain Yellow Bowl
20. Rio Grande Glaze III & IV Jar
22. Rio Grande Glaze IV Jar



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Bice, Richard A., Phyllis S. Davis, and William M. Sundt

2003 AS-5 Indian of Mining of Lead for use in Rio Grande Glaze Paint. Albuquerque Archaeological Society. Albuquerque

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1998 The AS-8 Pueblo and The Canada de las Milpas: A Pueblo III Complex in North-Central New Mexico. Albuquerque Archaeological Society. Albuquerque

From the Foreword

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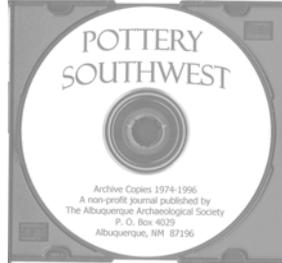
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