# AN ANALYSIS OF THE CERAMIC TRADITIONS OF THE JEWETT GAP SITE, NEW MEXICO

by

Eloise Richards Barter

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AN ANALYSIS OF THE CURVED TRANSITIONS
OF THE SHORT OAK BEND, NEW MEXICO

by

Elaine Richards Barker




In the Graduate College, University of Arizona

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Approved: _____ Director of Thesis _____ Date

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SIGNED:

Elaine Richards Baker

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## Chapter One

## Introduction

Emphasis is frequently put upon the importance of excavation of prehistoric sites. Of equal importance is the preparation and presentation of the material recovered in a form available to others. Too frequently, circumstances intervene between excavation and the study and publication of material. Ideally, only those who participated in the actual excavation should study the material for even the best of notes never recapture the total situation. When it is impossible for a site to be completely analyzed by those who first conceived the problems that led to its excavation, study that will rescue the materials from unclassified and dusty storage is a salvage job of some value. Such is the Jewett Gap Site.

The Jewett Gap Site is located in the west central portion of New Mexico, T.3S., R.18W., Sec. 24, $SE\frac{1}{4}$ $SW\frac{1}{4}$. It is designated site New Mexico F:14:1 under the Gila Pueblo survey system. During the field work, it was known as Gallo Pueblo.

The site is located in the Perry Lawson Canyon, the west tributary of Apache Creek, which in turn drains into the Tularosa River. It is on the south slope of the divide between the Fox and Gallo Mountains, atop a flat point which forms a small gooseneck from the west bank of the east fork of the Perry Lawson Canyon. Altitude at the site is 8100 feet above sea level.

The surrounding vegetation is Yellow Pine forest which is quite open, merging into a grassland two miles to the south. The soil is sandy.

It is, according to O'Bryan, good deer country with wild turkey and antelope sighted nearby. Water is available from a year-round spring located 300 yards to the northwest of the site in the main Perry Lawson Canyon, and seeps and pit holes in the adjacent arroyo (O'Bryan, notebook). Surface indications showed that the site consisted of approximately 25 rooms, 17 pit-kivas, and 4 scattered clusters of 1 to 4 rooms. Only 6 or 8 of the pit-kivas were seen as depressions during the preliminary survey.

## History

The Jewett Gap Site is an expression of the amalgamation of Pueblo and Mogollon traditions seen in the central mountain country of western New Mexico during the 11th and 12th centuries. The admixture is termed the Reserve and Tularosa Phases in the drainage of the Tularosa, San Francisco, and Blue Rivers.

This geographic region has long been of interest to archaeologists. In the early 1900's Hough surveyed the area and excavated a few sites. While standards and traditions of scholarship change, it is still possible to abstract general comparisons from Hough's work (1907).

Gila Pueblo in 1931 surveyed the same general area. This survey and the associated work to the south gave impetus to the concept that a third major cultural division (Mogollon) should be recognized in the southwest. (Gladwin, 1934; Haury, 1936a and 1936b).

During the 1940's and continuing until the present time, the Chicago Natural History Museum has been concentrating their archaeological program in the Mogollon area; specifically the drainages of the Tularosa and San Francisco Rivers near Reserve, New Mexico. This region is now termed the

Pine Lawn Branch (Danson, 1950). In a series of publications beginning in 1940, Drs. Paul S. Martin and John B. Rinaldo (Martin, Rinaldo, et al., 1940, et seq.) have attempted to outline the archaeological history of the area. Their publications are typified by careful and complete presentation of the archaeological material, with attempts to utilize the typology in reconstruction of cultural and social patterns.

Some work has been done by the Logan Museum of Beloit College in the same area as the Chicago Natural History Museum. One site report has been published (Nesbitt, 1938), but the other, Wheatley Ridge Ruin, is available only in manuscript.

Dr. E. B. Danson has surveyed the area correlating architectural types, geography and time as evidenced by surface sherds. The terminology for branches herein is that of Dr. Danson's (1950).

In 1947 Gila Pueblo again began work in the upper Tularosa River drainage north of the Reserve area. Interest was centered about the problems of dating several pottery types; St. Johns Polychrome, Reserve Black-on-white, and Tularosa Black-on-white; and of determining the extent of contacts between the Jewett Gap Site and surrounding areas, and the influences that may have been exerted on its people (O'Bryan, notebook). In an attempt to find a means of studying these problems, during the spring of 1947 Dr. Deric O'Bryan spent a month surveying sites in the Springerville-Quemado-Reserve triangle. Some trenching to recover charcoal specimens was carried on during this preliminary survey. On the basis of the preliminary analysis, Jewett Gap Site was chosen as the most likely to aid in the solution of the problems.

The first work at the Jewett Gap Site was during the 1947 survey

when 2 exploratory trenches were cut into the pueblo. The second year considerable trenching was done in the debris, plus clearing 2 pit-kivas and 3 rooms. During this season a total of 55 burials were uncovered.

Work planned for 1949 included extensive work in the pueblo itself and excavation of outlying clusters of rooms and pit-kivas. However, while this work was in progress, Gila Pueblo discontinued archaeological work. While attempts were made to finish the incomplete job, the expedition withdrew before the end of the season after clearing 9 rooms, 2 pit-kivas and uncovering 7 burials. All the artifacts from the three years work were stored, some without being cataloged.. Field recording material was deposited with the collections at Gila Pueblo without editing.

In 1951 the collections and buildings of Gila Pueblo were presented to the University of Arizona. The majority of the collections from the Jewett Gap Site were transferred to storage at the Arizona State Museum. Unfortunately, all the sherds from the Jewett Gap Site had been discarded after preliminary counts and neither the sherds nor the detailed counts were accessible to me.

## Problem

Initial interest in the Jewett Gap Site was aroused during discussions with Dr. Paul S. Martin of the Chicago Natural History Museum. The site is on the northern periphery of the Reserve area in which Dr. Martin has worked intensively for several years. These discussions centered around means whereby the Jewett Gap Site material might be made available to the archaeological profession. It was suggested that an analysis of the pottery could be undertaken by a student given access to

the collections by the Arizona State Museum. In its first form, the problem was one of salvage of as much information as was possible concerning the ceramic complex of the Jewett Gap Site.

Archaeology by its nature cannot deal with total culture, but only that fraction of the culture which is recoverable. In such problems as this, where only the whole pottery from the Jewett Gap Site is studied, further limitations are placed on cultural reconstruction.

Basically, two approaches are possible in ceramic studies. The first is technologic and relies upon quantification of the physical aspects of the pottery. This is widely used to establish differences between types, such as differences in design and temper. Other purely technologic quantifications include studies of vessel shape, rim form, and finish. All depend upon description within a uniform system.

A second approach is an attempt to correlate features of pottery that are observable to the archaeologist to some unit recognized by the prehistoric makers of the pottery. For instance, when one type of pottery (under archaeological classification) is always found near a firepit, it is to be concluded that the people who made the pottery also classified it as a type, a cooking vessel. This approach is much less frequently used, as in archaeological study cultural entities are seldom isolated in sufficient quantity to establish patterns.

A cultural entity is herein used to designate any grouping of artifacts that were consciously placed together by the prehistoric inhabitants of the locale being excavated. The material found in a burnt room would be a cultural entity. Articles in close association in a trash pile would not be. Material from a storage room probably would

not be a cultural entity. The best example of cultural entites usually found, and the one utilized for the Jewett Gap Site, is a grave. All the material placed with an individual in his grave is thought by his companions to belong with that individual. It is possible to determine the age, sex, and physical deformities of any skeleton. It follows that conscious patterns in age or sex grading of material placed in a grave may be recoverable by the archaeologist.

The Jewett Gap Site study was begun as a gross technologic analysis of the pottery. Observations were taken on the traditional features of shape, size, decorative patterns, fire-clouding, wear, and use-darkening. As the study progressed, it became increasingly obvious that these technologic features used by archaeologists were, in some cases, also correlated with the patterns followed by the inhabitants of the Jewett Gap Site. The second part of the study, that of cultural entities, evolved.

The technologic features of the study were first used to compare the ceramic complex of the Jewett Gap Site with surrounding areas, primarily the Reserve area, a Tularosa Phase site (Arizona W:10:37) at Point of Pines, and the Springerville area. Problems of dating are included in this.

The comparisons with the Reserve area are based primarily on a manuscript (Rinaldo and Bluhm) describing the culinary wares of that locality. When possible, descriptions of whole pottery from the publications of the Chicago Natural History Museum have been utilized. It is unfortunate and obvious that it is impossible to compare sherd percentages from one site with whole pottery from another. Consequently,

much of the detailed ceramic work of the Chicago Natural History Museum can not be utilized in this comparison.

The Starkweather Ruin report (Nesbitt, 1938) has been used to provide additional comparative material for the Reserve area when possible. The publication is, however, not specific concerning the range of variability of the recovered material, nor are the findings reported in sufficient detail to check distributions within the site.

One site of the Tularosa Phase has been excavated at Point of Pines. Comparable observations to those made on the vessels of the Jewett Gap Site collection are available for this site, Arizona W:10:37 (Breternitz, ms.). The number of vessels recovered from Arizona W:10:37 is small, with only 24 unpainted vessels included. Comparisons between Arizona W:10:37 and the Jewett Gap Site have been attempted, although the sample is not adequate to make any far reaching conclusions.

There is in the Chicago Natural History Museum about 350 Tularosa Black-on-white vessels. These are from purchased collections. Almost all are from ruins within a radius of about 50 miles from Springerville, Arizona. Many of the vessels are illustrated in Martin and Willis (1940: 178-192). Miss Elaine Bluhm and I made observations on this collection of shapes, design motifs, and layout. This material is utilized as a base for comparisons with the Tularosa Black-on-white from the Jewett Gap Site and will be referred to as the purchased collection.

The second phase of the problem, that of correlations between pottery types and grave occurance, was attempted in the hope that it would indicate part of the function of ceramic types in the Jewett Gap Site. It is this portion of the work that utilizes cultural entities,

as well as arbitrary archaeological study units. Those observable features in the pottery that were found to occur with burials of a particular age or sex in greater numbers than random chance would dictate are thought to be due to cultural selectivity on the part of the inhabitants of the Jewett Gap Site.

Acknowledgments

Dr. Paul S. Martin, Dr. John B. Rinaldo and Miss Elaine Bluhm of the Chicago Natural History Museum made possible the comparisons of the Jewett Gap Site by allowing use of certain of their unpublished manuscripts dealing with the pottery of the later phases in the Reserve area.

Dr. Harold S. Gladwin gave his permission to work with the Jewett Gap Site pottery. He also aided by annotating some of the field notes with thoughtful and provocative comments.

Without Dr. Deric O'Bryan's field notes and catalogue system, little could have been recovered.

Mr. William Bullard is currently preparing a study of the architecture of the Jewett Gap Site for publication. Mr. Bullard kindly provided a map he had prepared for publication and made possible the use of a uniform system of room designation between this thesis and his report.

The material from the Point of Pines Tularosa Phase site (Arizona W:10:37) is used by permission of the Department of Anthropology, University of Arizona.

The faculty of the Department of Anthropology, University of Arizona,

has been helpful throughout. Dr. E. W. Haury, Dr. E. B. Danson, and Mrs. Clara Lee Tanner were at all times willing to discuss even the most minor problems.

I wish particularly to thank Mr. E. B. Sayles and Miss Wilma Kaemlein of the Arizona State Museum. Without their ability to locate specimens, to make room where no room was, and to be cheerful and sympathetic when interrupted, this work would never have been possible.

# Chapter Two

## Materials and Methods

The conception of the problems involved in the pottery of the Jewett Gap Site necessitated detailed analysis of not only those features of the pottery that are recognized by the archaeologist as meaningful, but also those that might indicate significance to the people that used the pots.

In a collection such as this, stored for five years, the initial problem was the location of the specimens and cataloging of those specimens that had not been cataloged. Handling all of the pottery in this phase of the work also gave familiarity with the collections, so that the range, shape, and type was appreciated. In several instances, vessels cataloged by Gila Pueblo could not be located in the Arizona State Museum. These necessarily are not included in the following analysis. Another problem was that discrepancies existed between the field notes and the catalog cards. When these two sources did not agree on the provenience of a particular vessel, the location listed on the catalog card was used. It is not claimed that the latter was more correct, but simply that it was impossible to match specific individual vessels with the field notes.

After the collection was located and all uncataloged vessels were assigned numbers, detailed observations and notes were taken for each vessel. It was necessary to revise somewhat the initial list of observations during the study, and some features that appeared to be of use before the study began have since been dropped. The following

observations were taken for each vessel and utilized in the final work.

a. catalog number

b. location within the site: burial number, or room or fill location.

c. type of vessel: After determining the range of vessels and comparing this range with both published descriptions and type sherds, it was decided to use the terminology developed by the Chicago Natural History Museum for the Reserve area. In no case were individual vessels from the Jewett Gap Site sufficiently outside the range described for the Pine Lawn Branch to warrant the description of new types. Macroscopic comparison of paste and color indicated that the specimens from the Jewett Gap Site were close enough to those of the Reserve area to warrant the retention of the geographic modifiers, as well as the descriptive terminology.

d. vessel shape: Attempts at using verbal descriptions of vessel shapes proved too cumbersome for use. As a substitution, drawings of expected vessel shapes were prepared and a numeric designation assigned to each sketch. When a shape not on the key was encountered, a new sketch of that shape was added. Special features were noted verbally. Handle type, placement, and size was observed and noted.

e. vessel size: The maximum height and diameter for each vessel was measured to the nearest tenth of a centimeter. The thickness of the vessel wall was also measured at a point approximately 3 cm. below the rim. In the case of "maximum diameter" and "maximum height", classes of 5 cm. intervals were used for tabulating. It was felt that

5 cm. was small enough to retain any cultural significance in size difference, and greatly facilitated analysis.

f. The vessel rim shape was recorded by a sketch which was translated into the Colton system of rim classification (Colton and Hargrave, 1937: 10).

g. Exterior finish was noted, i.e., plain and polished, plain and unpolished, indented corrugated, unindented corrugated, or a combination of any of these. In the case of corrugated finishes, the number of corrugations per 2 cm. was recorded. In the case of painted vessels, the primary body design motif, the neck motif, and framing lines were noted. For verbal description of motif, the terminology established by the Clearing House for Southwestern Museums New Letter (No. 35: 120) was used.

h. The interior finish was also noted. In most cases this was an indication of whether or not the interior was smudged and polished.

i. Brief notations were made on the amount and placement of fire-clouding.

j. In an attempt to ascertain use, the amount and placement of worn areas on vessels was noted. Darkening of the exterior of the vessel, as if from use, (as opposed to fire-clouding) was also recorded. Use-darkening was distinguished from fire-clouding on the basis of the former's more carboniferous appearance and its appearance being limited to the surface. As vessels considered use-darkened were almost always worn, and use-darkening was restricted to the bottom and sides of the vessel, this is considered a valid indication of the pot being used over an open fire.

Each of these observations was tabulated by type, separating those vessels found in graves from those from the rooms or fill. This initial division was experimental and did not prove to be significant. Consequently, this has not been retained except where it is indicative of some cultural pattern.

Once the observed data was tabulated, modal averages were ascertained. Mode refers to the value that occurs most frequently (Waugh, 1952: 69). It is felt that a mode reflects that which is called "real pattern" more exactly than an arithmetic average. A mode tends to disregard extremes and indicates only that class which is most common. Consequently, mode can be used on all data; its use is not limited to numerically expressed measurements. When a "real pattern" is recognized by an archaeologist, it becomes a "pottery type".

These modal occurrences were then charted by type (Table 2). This chart formed the working model from which comparisons with other areas were made.

For the analysis of ceramic patterns within the Jewett Gap Site, a chart of number and types of pottery for each burial was prepared (Table 3). The skeletal material from the Jewett Gap Site was incomplete and badly fragmented. It has not been studied. The field notes did include estimates of age and sex for about 75 per cent of the burials. This was the material used (Table 3) uncritically in an attempt to ascertain burial patterns.

## Chapter Three

## Technologic Features

Comparisons of features of the pottery found at the Jewett Gap Site were primarily based upon the modes established for each type. These modes were then compared with other types from the Jewett Gap Site, as well as with material from the Reserve area, Point of Pines, and sites near Springerville, when comparative data was available. The material upon which these comparisons are based can be found in Table 3.

### Unpainted Types

Two hundred and seven unpainted vessels were present in the Jewett Gap Site collection. These were distributed among 13 recognized pottery types (Table 1).

While originally separated in tabulation by grave pottery, and room and fill pottery, few differences were ascertainable between these two catagories. All of the following material, therefore, lumps both grave and room-fill proveniences except where specifically stated.

A few features cross cut all the types found at Jewett Gap Site.

The interiors of bowls are always smudged and highly burnished with the exception of Alma Plain and one bowl of Tularosa Fillet Rim. The latter showed indication of secondary firing and the original smudging may have been burnt out.

Jars, while occasionally darkened, are not typically smudged in the interior. This is perhaps due to the difficulty of finishing the interior of a vessel with a relatively narrow orifice, nor would

smudging the interior of a jar be decorative as it is in bowls.

At Arizona W:10:37, all bowls except Alma Plain have smudged interiors. Here also, jars are typically darkened, but not smudged, although an occasional smudged interior is noted.

Tularosa phase sites in the Reserve area show an increase in smudged interiors during the phase. Some bowls of all types are found without smudged interiors.

It is not felt that this data should be interpreted as indicating a tendency towards less smudging in the Pine Lawn Branch. The material being compared is not equitable as the sample was composed of whole vessels in two instances and sherds in the third.

Fire-clouding on all types of bowls is primarily restricted to the rim. Some experimental attempts at smudging the interior of bowls at the Chicago Natural History Museum camp at Pine Lawn indicated that one satisfactory method was to invert the bowl over pitchy pinewood and cover the exterior with large sherds to prevent exterior smudging. The location of fire-clouds at the rim on the Jewett Gap Site bowls seem to indicate that this method, or a variant of it, may have been used.

At Point of Pines also, fire-clouding was either missing, or localized to the rim of bowls. No comparable material is available from the Pine Lawn Branch. There is no apparent localization of fire-clouding on jars.

Vessels of the corrugated types occasionally had indented or nipple bases. The indented base was formed by making a hemispherical form of coils, then beginning the vessel from this base rather than from a flat base of coils. Related to the indented base is the nipple

base. In this form the beginning coils are made into a hollow cone protruding as much as 5 cm. into the vessel (fig. 4).

The indented base is common in the following types at Jewett Gap Site: Reserve Indented Corrugated, Reserve Plain Corrugated, and Tularosa Patterned Corrugated. It is found, but is not common, in Tularosa Fillet Rim and Tularosa Patterned Corrugated, Reserve variant. It appears almost exclusively in bowls.

Three nipple bases are present; 2 in Reserve Plain Corrugated bowls and 1 in a Tularosa Patterned Corrugated bowl 39 cm. in diameter. In all of these the nipple shows some wear, mostly localized at the end of the protuberance.

Both nipple bases and indented bases occur frequently in vessels that show wear, but no nipple bases, and only around 10 to 25 per cent of the indented bases, show use-darkening. This may indicate that these features of base decoration are indicative of a storage or serving, as opposed to a cooking, function.

Indented bases are found in one sherd of Tularosa Black-on-white from the Jewett Gap Site. It occurred in small numbers in the purchase collections of Tularosa Black-on-white at the Chicago Natural History Museum and in the Scorse collection from Gila Pueblo.

The nipple base has not been reported from the Reserve area although indented bases occur there occasionally. Nipple bases are reported from Point of Pines (E. W. Haury, personal communication), although none was present in the collection from Arizona W:10:37. Indented bases from Arizona W:10:37 were found in a painted McDonald Corrugated bowl and a Reserve Indented Corrugated jar.

The indented corrugated types at Jewett Gap Site seem to have been made with a blunt, rounded tool, such as a dull awl, and the fingers. When indications are clear, the techniques seem to be divided about half and half.

The bowls always have finer corrugations than jars at Jewett Gap Site. This difference is not as clear cut at Arizona W:10:37 where the modal size of corrugations in both bowls and jars is the same.

The prime distinguishing characteristic of the Reserve and Tularosa Phases is the amalgamation of Anasazi traditions with the Mogollon base. In the ceramic provience, this is most obvious in painted types, i.e., the addition of black-on-whites to the existing pottery complex. Yet it shows also in the culinary realm.

The Mogollon had long textured their pottery with incising, punching, and scoring. They apparently first left coils unobliterated to form the basic type, plain corrugated. Yet in this wealth of texturing techniques, it was the Anasazi that first developed the indented corrugated type. The first indented corrugated appears during the Reserve Phase in the Pine Lawn Branch. This is usually dated beginning at around A.D. 1000. Indented corrugations first appear pre-A.D. 950 in the north (Gladwin, 1945: 49-66). Indentation in the Pine Lawn Branch postdates the introduction of locally made black-on-white types (specifically, Reserve Black-on-white, see sherd counts in Martin and Rinaldo, 1950b: 536-548). This is in accord with the theory in social anthropology which states that objects in direct connection with daily household routine are less readily accepted into a culture (Linton, 1946, in Reed and King 1950:21).

Once the Mogollon people seized upon the concept of indentation,

they used it. The concatenation of indented types is long . . indented fillets on Tularosa Fillet Rim, Reserve Indented Corrugated, Tularosa Patterned Corrugated and all their variants. These unpainted types make up the bulk of the ceramic complex at the Jewett Gap Site.

Tularosa Fillet Rim (Gladwin, 1934:18; Kidder, 1924:98)

Numerically, and in terms of distribution within the site, Tularosa Fillet Rim appears to be the most popular of the types found at the Jewett Gap Site. It is also very frequent at the Tularosa Phase Sites in the Pine Lawn Branch.

The most common shape is bowl shape 7 (fig. 3) with 11 of the 64 bowls being of this shape. It is followed closely by bowl shape 1 and bowl shape 4 (fig. 3). Generally, the Tularosa Fillet Rim bowls are deep, with straight or gently outcurving sides.

No vessel shapes are described for Tularosa Fillet Rim from the Pine Lawn Branch. Pictures included in Martin, Rinaldo and Bluhm (1954:69) and the Starkweather Ruin report (Nesbitt, 1938: plates 35, 36) indicate that the same range of shapes occurs in both Jewett Gap Site and the Pine Lawn Branch.

There was only one Tularosa Fillet Rim bowl from Arizona W:10:37. No comparisons will be attempted on such a small sample. Wendorf (1950: 119, 121) indicates that an outflared bowl is more common at Point of Pines than at the Jewett Gap Site.

Rim shapes IA6 and IA7 were by far the most common at Jewett Gap Site. IA2 was of secondary importance (fig. 4).

In the photographs in Martin and Rinaldo and in Nesbitt (see above), rim shape IA10 (fig. 4) seems more frequent in the Pine Lawn Branch than

at the Jewett Gap Site where it occurred only in a minority of vessels. This difference may be due to selectivity in choice of specimens used to illustrate the reports rather than a difference in rim form in the Pine Lawn Branch.

The number of fillets below the rim in the Jewett Gap Site collection ranges from 1 to 4, with 2 by far the most common. Four of the 64 vessels have incisions rather than indentations forming the fillets.

Two to 3 fillets are listed as the most common at Pine Lawn. It can be mentioned in passing that the Tularosa Fillet Rim illustrated from Pecos. (Kidder, 1934: 182) would be typical at either Jewett Gap Site or in the Reserve area of Tularosa Patterned Corrugated Reserve variety.

Three bowls have San Francisco Red exteriors, that is, an exterior red slip. This feature has been noted in a small percentage of the sherds in the Chicago Natural History Museum's excavations.

Reserve Indented Corrugated (Gladwin 1934: 18: Rinaldo and Bluhm ms.)

Bowl shape 4 is the modal shape for Reserve Indented Corrugated (fig. 3). Specimens from the room and fill provenience, as opposed to those from burials, show no significant divergence.

Of the 18 Reserve Indented Corrugated jars from the Jewett Gap Site, 10 are burial inclusions while 8 are from rooms or fill. This type shows one of the few clear-cut differences between burial and non-burial proveniences in technologic features.

Burial jars are smaller than those from the rooms and fill, ranging in height from 10.7 to 24.1 cm. The modal shape is 11, followed closely by 14 (fig. 3).

The jars from the rooms and fill are larger, with a range in height from 22.2 to 42.0 cm. There is also a difference in shape, with shapes 8 and 12 being the most frequent (fig. 3). These larger forms are frequently set into the floor for storage places. Thus, the function of the jars within the Jewett Gap Site community seems to account for difference in size and shape (Chapter Four).

The range of vessel shapes seems to be typically the same in the Pine Lawn Branch where jars are described as "wide mouthed with outflaring rims," and bowls are "straight sided or slightly outcurving" (Rihaldo and Bluhm, ms). Illustrations in Nesbitt (1938: plates 38 and 40) and Martin and Rinaldo, et al., (1950b: 527; 1952: 64; 1954: 64, 68) seem to indicate the same range observed at the Jewett Gap Site.

The collection from Arizona W:10:37 is all from room and fill provenience and conforms to the observations at the Jewett Gap Site - shape 8 is the most common (fig. 3). However, the modal size is smaller with the modal height ranging under 15 cm. Wendorf (1950:18) substantiates this.

Rim form on the Jewett Gap Site jars is equally divided between IB3, IB6, IC2, IC3, and ID3. Thus, the rim is outflared on all the jars of this type. It is not, however, found in bowls where IA3 and IA6 are the most common rim types (fig. 4).

As noted above, jars from the Reserve area typically have outflaring rims also.

The rim shape on jars from Arizona W:10:37 is most similar to those from the Jewett Gap Site. On bowls, however, the rim is slightly different, IA11 being most common (fig. 4).

At the Jewett Gap Site modal average of corrugations per 2 cm. is 4 for jars and 6 for bowls. The average number of corrugations per 2 cm. on both forms is 5.2 corrugations per 2 centimeters in the Reserve area. This compares favorably. For Arizona W:10:37 bowl corrugations are 5 per 2 centimeters, while jars are 5 per 2 centimeters.

All of the bowls from the Jewett Gap Site are smudged in the interior. Thirty per cent of the jars have smudged interiors, while 56 per cent are darkened in the interior. There is a slightly higher proportion of smudged and darkened jars from graves than from the rooms and fill although the same proportion is darkened by use from both localities. This is connected with no apparent cultural function.

Reserve Neck Indented Corrugated (Martin and Rinaldo, personal communication)

This type differs from Reserve Indented Corrugated in that only the neck is corrugated while the lower portion of the vessel is plain, usually polished. It occurs only as a jar form.

No clear modal shape is present in this type at the Jewett Gap Site. Shapes 5, 8, and 11 are all represented (fig. 3). Heights are equally common between 5.9 and 10.0 cm. and 15.0-19.9 cm.

One bowl-jar vessel is present. The bottom is composed of a plain brown bowl which was finished, and on this base a jar neck of indented corrugations was added.

Rim form IB3 is the most common (fig. 4).

The indented corrugations begin above the shoulder break in all cases. Range in number of coils per 2 cm. is 4 to 8, with 5 the modal number of coils per 2 cm.

This type is usually considered earlier than Reserve Indented

Corrugated, although the evidence from stratigraphy is not conclusive as sherds of Reserve Neck Indented Corrugated can be recognized only when both indented coils and the plain base appear on one sherd. The statement that this is earlier may, therefore, be circular reasoning, based on the fact that Reserve Neck Indented Corrugated is in appearance a less complex type, more closely related to earlier neck banded types than Reserve Indented Corrugated. Such reasoning may prove fallacious.

No data on whole vessels of this type is available from the Reserve area, nor were any Reserve Neck Indented Corrugated jars recovered from Arizona W:10:37.

Tularosa Patterned Corrugated (Rinaldo and Bluhm, ms., Wendorf,1950:38)

Tularosa Patterned Corrugated is most common in bowl form. Bowl shape 6 is the modal average (fig. 3) with a diameter of 15.0 to 19.9 cm. the most common. Jar form is represented in only one example, shape 8 (fig. 3).

One vessel, a jar, is present at Arizona W:10:37. It is of shape 5 (fig. 3).

Jars from the Pine Lawn Branch are "wide mouthed with plain outflaring rims with rounded lips" (Rinaldo and Bluhm, ms.). This shape would conform with both the example from Point of Pines and the Jewett Gap Site. Photographs included in Martin and Rinaldo (1950: 525) and the Starkweather Report (Nesbitt 1938: Plate 39) support the contention that the jar forms do not differ from the one found at the Jewett Gap Site.

The bowl forms from the Jewett Gap Site are all smudged. This confirms observations from the Reserve area where only smudged interior

bowls are found in Tularosa Patterned Corrugated. Bowls have "straight sides or slightly outcurving rims" (Rinaldo and Bluhm, ms.).

No bowls were found at Arizona W:10:37.

Rims on Tularosa Patterned Corrugated jars at Jewett Gap were usually of rim form IA6. The one jar was of rim form ID2 (fig. 4). This compares favorably with photographs and verbal statements concerning rim form in the Reserve area (see above). The rim is missing on the one jar from Arizona W:10:37.

Six to 9 corrugations per 2 cm. were found in the Jewett Gap Site with a modal average of 6. No comparative data is available for this type in the Pine Lawn Branch. Five corrugations per 2 cm. are found on the Arizona W:10:37 jar.

Perhaps the most obvious feature of Tularosa Patterned Corrugated is the designs formed by areas of indented corrugated coils, separated by plain coils. This also shows the greatest regional differences.

In the Jewett Gap area the most common designs are short oblique parallel lines and small triangular or diamond areas arranged in definite patterns. One example of an eccentric design resembling 'birds' is present (fig.10). In the Reserve area chevrons, diamonds, or square spirals predominate. These are usually in large overall patterns (Rinaldo and Bluhm, ms.; Martin and Rinaldo 1950: 525; Nesbitt 1938; plate 39).

The one jar from Arizona W:10:37 had diamond shaped areas within which there were widely spaced indentations resulting in a large diamond shaped checkerboard.

Samples from the Pine Lawn Branch and Jewett Gap Site seem complete

enough to postulate a difference in design size in Tularosa Patterned Corrugated with the Jewett Gap Site concentrating on smaller design elements. There also seems to be a difference in designs, with oblique parallel lines replacing the square spiral and chevron of the Reserve area.

Point of Pines area may well have substituted McDonald Corrugated for this type. McDonald Corrugated is represented by three vessels at Arizona W:10:37. None was present at the Jewett Gap Site, and only one sherd of McDonald has been uncovered in the excavations in the Reserve area (Martin, Rinaldo and Bluhm, 1954: 77).

Tularosa Patterned Corrugated, Reserve variant (Martin and Rinaldo 1950b: 526-530; Rinaldo and Bluhm, ms.)

Tularosa Patterned Corrugated, Reserve variant, was formerly known as Plain and Indented Corrugated. It appears under this name in most of Martin and Rinaldo's published work. In Rinaldo and Bluhm (ms.) it is treated as a subdivision of Tularosa Patterned Corrugated and no descriptive materal is segregated from that type. For comparisons, therefore, see section on Tularosa Patterned Corrugated.

The modal shape bowl of Tularosa Patterned Corrugated, Reserve variant in the Jewett Gap Site collection is the same as that for Tularosa Patterned Corrugated. In the larger sample of jar shapes, 11 is the most common (fig. 3). One of these is a bowl-jar, with the plain corrugated jar neck built up from an indented corrugated bowl after the bowl rim was finished.

The only bowl of Tularosa Patterned Corrugated, Reserve variant found at Arizona W:10:37 had straight sides and a flat bottom. This is

similar to shape 4 (fig. 3) except it is much deeper.

Shapes for the Pine Lawn Branch are included under Tularosa Patterned Corrugated.

Rim form at the Jewett Gap Site is ID3 for the jars and IA4 for the bowls (fig. 4). This difference between Tularosa Patterned Corrugated and the Reserve variant is not considered significant. In all the corrugated types, the rim form varied greatly, even on one vessel. Significance seems to be limited to lip direction.

Corrugations per 2 cm. ranged from 5 to 9 in bowls, with a mode of 6, and from 5 to 8 in jars, with a mode of 5. Five corrugations per 2 cm. were noted in the 1 bowl from Point of Pines.

Design treatment consisted of 3 decorative schemes. The treatment is either alternate plain coils and indented coils; or 3 rows of plain coils alternates with 3 rows of indented coils; or the lower half of the vessel is composed of indented coils while the upper half is plain coils. These schemes are equally divided.

All these are known from the Reserve area. At Point of Pines the one vessel has a row of 5 indented coils separating plain coiled areas on both sides.

Reserve Plain Corrugated (Martin and Rinaldo 1950b: 500, 528, Rinaldo and Bluhm, ms.)

Reserve Plain Corrugated is found in both bowls and jars. The bowl form is divided into 2 variants, Reserve Plain Corrugated and Reserve Plain Corrugated, Tularosa Variant. The latter is distinguished on the basis of 2 rows of indented fillets just below the rim. This variant had been recognized by the Chicago of Natural History Museum staff during

during their work at Pine Lawn, but appeared so infrequently, it was not described. At the Jewett Gap Site, 5 of 11 Reserve Plain Corrugated bowls were of the Tularosa variant.

A difference in bowl shape exists between Reserve Plain Corrugated and the Tularosa variant. The latter, shape 6, is shallower than the former, shape 4 (fig. 3). The Tularosa variant is also slightly larger in modal diameter.

Jar form 11 and 5 are the most common (fig. 3). Height ranges from 7.0 to 30.0 cm. with the mode falling between 10.0 and 14.9 cm.

Verbal descriptions of vessels from the Reserve area indicate no difference from the shapes found at Jewett Gap Site (Rinaldo and Bluhm, ms.).

Only one jar of Reserve Plain Corrugated was found at Arizona W:10:37. It shows southern influence in that it has a modified Gila shoulder.

The modal rim forms in the Jewett Gap Site for Reserve Plain Corrugated are IA6 for the regular bowls and IA3 for the Tularosa variant (fig. 4). No comparable material is available from Arizona W:10:37 or the Reserve area.

Jars have a rim form of IB3 (fig. 4). This agrees with that from the Reserve area and Point of Pines (Martin and Rinaldo, 1950: 524).

Corrugations per 2 cm. range from 5 to 9 in Reserve Plain Corrugated bowls with an average of 7. In the Tularosa variant the modal average is 8, indicating that finer coiling goes along with the addition of indented coils around the rim and a larger modal size. The jars range from 4 to 6 corrugations per 2 cm. with a modal average of 6.

Reserve Plain Corrugated in the Reserve area has a modal average of 6 corrugations per 2 cm., less than those from the Jewett Gap Site. At Point of Pines, the one vessel has 5 corrugations per 2 cm.

Reserve Neck Plain Corrugated (Martin and Rinaldo, personnel communication)

Reserve Neck Plain Corrugated has a plain body with the coiling localized to just above the shoulder break. In the Reserve area it is considered earlier than Reserve Plain Corrugated (page 22).

The jars of this type do not differ from the jars of Reserve Plain Corrugated in shape. It does have a slightly less outcurved rim (IB3, fig. 4) and a lower modal average of corrugations per 2 centimeters (4).

There were no vessels of this type recovered from Arizona W:10:37. The vessels of this type from the Reserve area do not differ from those found at the Jewett Gap Site.

The following types have been, so to speak, in the Mogollon "bag of tricks" since the San Francisco Phase or earlier. As their appearance is constant in sites of the Tularosa Phase in the Reserve area and are not limited (in most cases) to only one provenience within the Jewett Gap Site, there is no reason to postulate that these are "heirloom pieces".

Alma Plain (Haury 1936b: 32; Martin and Rinaldo 1947: 362 - 368)

The Alma Plain from the Jewett Gap Site differs in shape from that in the Reserve area primarily by the addition of two variant jar shapes (fig. 3, 9 and 10). The bowl tends to be shallower than some illustrated from the Reserve area (fig. 3: 6).

Jar shape 9 will be noted again as a shape occurring in San Francisco Red (fig. 3). From all appearances, it seems to have collapsed

somewhat during construction. It may be that finer temper was used in plain wares than in corrugated types, and the finer temper should take a polish better. If this were the case, the finer tempered clay might tend to collapse easier during construction. All this, of course, is supposition. Gross inspection of broken edges of the Jewett Gap Site vessels tended to substantiate the above reasoning.

Only one jar and one bowl of Alma Plain were recovered from Arizona W:10:37. The jar is within the range of the Jewett Gap Site collection and the bowl tends to be more incurved than those from the Jewett Gap Site. Of more interest are the three plates found at Arizona W:10:37. Nothing of this shape was recovered from the Jewett Gap Site, nor from the Reserve area.

Handles are found on 3 of the 10 jars. All are straps extending from the shoulder break to just below the rim. This is similar to handles in the Pine Lawn Branch.

Rims on both jars and bowls are straight, with the most common rim form being IA2 (fig. 4). Examples from the Reserve area and the one bowl from Arizona W:10:37 also have straight rims.

Alma Plain tends to show less careful polishing than San Francisco Red. This may be due to the fact that it is unslipped.

San Francisco Red (Haury, 1936b: 28-31)

Four jars of San Francisco Red were recovered. One of these was too badly broken to discern shape. Two are of shape 9 (fig. 3). It is of interest to note that the remaining vessel is identical in shape to that of a Tularosa Black-on-white jar, both of which were found in burial 21 (fig. 9, 1, and 2). Size tended to be large, with 3 of the 4

jars over 25 cm. in diameter.

The narrow necked jar is typical of shapes in the Reserve area. It is also similar to those of the later periods in the Mimbres (Haury, 1936a; fig. 28).

No San Francisco Red vessels were recovered from Arizona W:10:37.

Rim forms were IA7, IA4, and IA3 (fig. 4). No comparable material is available from the Reserve area.

Reserve Smudged (Nesbitt, 1938: 139; Martin, Rinaldo and Bluhm, 1954: 73)

Thirty bowls of Reserve Smudged were present in the Jewett Gap Site collection.

The modal shape of these bowls tended to be slightly incurved (fig. 3, Nos. 2 and 3). This incurved shape differs from the Reserve area judging by the schematic sketches in Martin and Rinaldo (1950: 36). However, in photographs of this type in Nesbitt (1938, plates 35 and 36), the bowls appear to be incurved. This may be associated with the change in function of Tularosa Fillet Rim at the Tularosa Phase sites of the Reserve area (see Chapter Four).

No Reserve Smudged was found at Arizona W:10:37.

There is insufficient data to compare other features of Reserve Smudged in the Reserve area. At Jewett Gap Site, rim form IA4 is the mode (fig. 4). This indicates that a flattened rim is almost limited as a major form to Reserve Smudged.

Reserve Punched Corrugated (Rinaldo and Bluhm, ms.)

Two jars of Reserve Punched Corrugated were found, one of shape 8, the other of shape 5 (fig. 3). Both were small, ranging between 10.0 and

14.9 cm. in height. Rim form is ID3 in both cases (fig. 4).

Reserve area jars are typically wide mouthed (Rinaldo and Bluhm, ms.). There, also, they are small; the range being between 11.0 and 16.8 cm. in height.

No Reserve Punched Corrugated was found at Arizona W:10:37.

In the Jewett Gap Site collection, both specimens have plain bases with corrugations beginning at the shoulder break. One specimen has a series of overlapping punches showing no definite plan or design. The other has a series of lines forming chevrons and curved panels punched into it.

Rinaldo and Bluhm (ms.) state that designs in the Reserve area are geometric. No photographs are available to sufficiently compare designs.

Reserve Incised Corrugated (Martin and Rinaldo, 1950a: 359-360; Rinaldo and Bluhm, ms.)

A jar and a bowl of Reserve Incised Corrugated were found. The bowl was the most incurved specimen in the collection, while the jar closely resembled those of patterned corrugated (fig. 3, 8).

The Reserve area jars are wide mouthed. No bowl form is listed from there (Rinaldo and Bluhm, ms.).

No specimens of this type were recovered from Arizona W:10:37.

Designs on both the bowl and the jar were chevrons incised into the coils. The jar had a plain base.

Unpainted Types - Summary

In those features compared for the unpainted pottery types of

Tularosa Phase sites in three areas (Jewett Gap Site, Arizona W:10:37, and the Reserve Area), only minor differences were noted. This lack of difference is encouraging. It tends to validate any conclusions made on the basis of the presence of these unpainted pottery types in the three areas for, as judged by the evidence compiled here, the types are essentially the same in the three areas under comparison.

Some minor differences do exist. These can be quickly summarized.

1. Nipple bottoms, present at Jewett Gap and Point of Pines, have not been found in the Reserve area.

2. There is perhaps more universality of bowl smudging at Arizona W:10:37 and the Jewett Gap Site than in the Reserve area; however, work with sherds at Arizona W:10:37 or Jewett Gap might reverse this statement.

3. Indented corrugated jars are smaller at Point of Pines than at Jewett Gap Site or the Reserve area. This may point to temporal or functional differences.

4. Tularosa Patterned Corrugated is decorated with some different and smaller design elements at Jewett Gap than in the Reserve area.

5. Some southern influence in shape is noted in vessels of the Point of Pines Tularosa Phase site that are lacking in the Reserve area and the Jewett Gap Site.

Material was available on wall thickness for all three areas, but it was not included herein. The Reserve area measurements were taken on sherds rather than on a constant place on a whole vessel. Consequently, values for the Reserve area showed a greater range and no significance

could be ascertained.

Of more significance is the presence or absence of pottery types in the three areas (table 6). This seems to imply temporal differences and will be discussed later.

On reviewing the evidence, the only tentative conclusion that can be arrived at is that in minor details there seems to be greater similarity between the unpainted types of Arizona W:10:37 and the Jewett Gap Site than between Arizona W:10:37 and the Reserve area. It seems clear, however, that greater cultural similarity existed between Jewett Gap and the Reserve area than between either of these and Point of Pines. This can hardly be termed a new and startling conclusion.

## Painted Types

For all the painted types present at the Jewett Gap Site, except Tularosa Black-on-white, less comparative material is presented than for the unpainted types. This is so for two reasons. First, there are insufficient numbers of most types at the Jewett Gap Site to form a base for comparison. Secondly, since only the presence of trade types is mentioned in reports, there is no material with which to compare details.

Most closely associated of the painted types with the Mogollon culinary tradition are the two types, Tularosa White-on-red and Starkweather Smudged Decorated.

Tularosa White-on-red (Martin, Rinaldo and Bluhm, 1954: 73)

Both of the bowls of Tularosa White-on-red are essentially bowls of Tularosa Fillet Rim with the addition of white line designs on the exterior (fig. 7, no. 1). The bowl shape and size are in the range of

Tularosa Fillet Rim, shape 7 in the present cases (fig. 4). The exterior white line design is nested terraces. This design is common in St. Johns Polychrome and forms the primary Mogollon element in the latter type.

It is unfortunate that there is no clear evidence at this time as to whether St. Johns Polychrome or Tularosa White-on-red is the earlier type. Certainly the lifetime of both falls within the defined limits of the Tularosa Phase, and both are later than the beginning of Tularosa Black-on-white (Barter, ms.).

Starkweather Smudged Decorated (Rinaldo and Bluhm, ms.)

One bowl of Starkweather Smudged Decorated is found at the Jewett Gap Site (fig. 7, no. 2). The design is atypical of the type as defined in the Reserve area. Around the rim and just below it are 4 sets of interlaced "U's" with sawtooth edges. In the center is a grid, with a dot in the center of each grid square. Other than in design, it does not differ from specimens in the Reserve area.

There is no question but what Starkweather Smudged Decorated type is confined primarily to the Reserve Phase, and that its occurance in a Tularosa Phase site is unusual, but not unprecedented (Barter, ms.).

The classification of black-on-reds of the Pueblo III period is in a state of flux. It has been popular to term all black-on-reds that are treated in a Tularosa style of design Wingate Black-on-red. Recently, it has been realized that the majority of these do not adhere to the original description of Wingate Black-on-red in color and lack of polishing (Gladwin, 1931; 29-31). Currently, the tendency is to segregate the atypical Wingate Black-on-reds. They are given such field names as

North Plains Black-on-red (Dittert, personal communication), St. Johns Black-on-red (Mera, 1934: 14), and "Tularosa-style" Black-on-red (Barter, ms.).

None of these type-names has as yet been described and delineated, although St. Johns Black-on-red is rapidly becoming common usuage.

Little comparable material is available in such a situation. Wingate Black-on-red, St. Johns Black-on-red, and "Tularosa-style" Black-on-red are all present during the Tularosa Phase in the Reserve area. There is also an aberrant Wingate Black-on-red found at Point of Pines. What connection these types may have is as yet unknown.

Wingate Black-on-red (Gladwin, 1931: 29-31; Gladwin, 1945: 71-73)

The three vessels of Wingate Black-on-red, all from Burial 50, conform in all respects to the original description by Gladwin (1931: 29-31). The design on one of them consists of solid and hatched sawtooth lines ending in interlocking square scrolls. One has two bands of solid and hatched terraced lines. The third is a design of interlocking hatched and solid circular scrolls with sawtooth endings. There is no outside design. Two of the designs are placed in a circular band around the interior of the bowl while the third is divided into a bisected layout (fig. 7; nos. 3, 4, and 5).

Puerco Black-on-red (Colton and Hargrave, 1937: 120-121)

One bowl of Puerco Black-on-red was associated in Burial 50 with three Wingate Black-on-red bowls. It is highly polished while the Wingate examples are not. The design is somewhat unusual. The primary elements are a horizontal band of contiguous diamonds which are filled

with checkerboards. Also, there are just below the rim, panels of three horizontal solid lines separated by squares filled with checkerboards (fig. 7, no.6).

St. Johns Black-on-red (Mera, 1934:14)

One pitcher is identified as St. Johns Black-on-red. It is almost identical with a pitcher of Tularosa Black-on-white. The design element is interlocking hatched and solid circular scrolls. The black paint is glazed. The handle is an animal effigy knob (fig. 7, no. 7).

Springerville Polychrome (Danson, ms.)

St. Johns Polychrome (Colton and Hargrave, 1937: 104-106) and the related type, Springerville Polychrome, are considered to be guide types to the Tularosa Phase. Springerville Polychrome is separated from St. Johns Polychrome when either glaze paint, white paint outlining the interior design, or black paint added to the exterior design is present (Danson, ms.). It seems to be somewhat later than St. Johns Polychrome.

Two bowls of Springerville Polychrome are present at the Jewett Gap Site. Both are badly broken. One bowl has an interior treatment that is typically St. Johns. The design, in black glaze paint, consists of solid and hatched interlocking circular scrolls, separated by solid terraces. The exterior design is composed of continuous nested terraces (fig. 7, no. 8; fig. 8, nos. 1 and 2).

The other Springerville Polychrome bowl has an interior design laid out in two bands, both of which consist of solid terraces separated by hatched squares. The interior black design is outlined in white. The exterior treatment of this vessel consists of two horizontal bands of

white (fig. 8, nos. 3 and 4). Horizontal white bands on the exterior of a bowl is more typical of Houck Polychrome (Roberts, 1932: 111-112) than of St. Johns and Springerville Polychromes.

Springerville Polychrome has been found in small quantity in several of the excavated Tularosa Phase Sites in the Reserve area. Only two of the three variations of Springerville Polychrome have been uncovered in the Reserve Area: subglaze paint, and the addition of white paint to the interior design. The other variation, addition of black paint to the exterior design, has not been found (Barter, ms.).

Preliminary sherd counts from the Jewett Gap Site indicate that both St. Johns Polychrome and Houck Polychrome are present in sherd form, although the sherds are not available for inspection. Houck Polychrome is limited to the eastern portion of the Reserve area, in the Tularosa and San Francisco River valleys.

Puerco Black-on-white (Gladwin, 1931: 24-26)

Only one vessel of Puerco Black-on-white was present in the collection. It is a bowl, with a panel around the rim consisting of a design of parallel lines separated by negative diamonds filled with broad cross hatches (fig. 7, no. 9).

Mimbres Black-on-white (Cosgrove, 1932: 72-76)

While no vessels of Mimbres Black-on-white are present, the preliminary sherd counts show that sherds of these types were found (O'Byran notebook). There is no means of determining whether these sherds were Classic or Boldface.

Reserve Black-on-white (Nesbitt, 1938: 138; Martin and Rinaldo, 1950b: 502-519)

Seven vessels (two bowls and five pitchers) were identified as Reserve Black-on-white (fig. 5, nos. 8-10; fig. 7, nos. 10-14). Pitcher shapes are typical of those known from the Reserve area (Martin and Rinaldo, 1950). The modal size was 15.0 - 19.9 cm. Bowl shape tends to be straight sided or slightly incurved. The modal diameter ranges between 20 - 24.9 cms.

This compares favorably with the Reserve area. Rinaldo's original description of Reserve Black-on-white listed shapes of pitchers in that area as having "globular bodies, sloping shoulders, vertical necks and thick strap handles attached at the rim or just below the rim" (Martin and Rinaldo, 1950: 503), while the bowls are "hemispherical occasionally deep conical" (Martin and Rinaldo, 1950: 503). This does not indicate a significant difference from the Jewett Gap Site.

The design elements employed on the Reserve Black-on-white from the Jewett Gap Site are also typical of Reserve as known in the Pine Lawn Branch.

One bowl design is composed of solid and hatched sawtooth lines in a quartered pattern (fig. 5, no. 8). The other is solid and hatched interlocking double curves ending in sawteeth. Checkerboards are used as fillers. The pattern is bisected (fig. 7, no. 10).

The design of one pitcher is composed of solid and hatched interlocking scrolls with terraced sides. The neck design is composed of verticle solid lines in groups (fig. 5, no. 9). Three of the pitchers use groups of parallel solid lines separating opposed solid sawtooth lines

as a primary element. The neck designs are opposed solid terraces; opposed solid terraces and groups of parallel straight lines; and pendant triangles (fig. 5, no. 10; fig. 7, nos. 13-14). A fourth miniature pitcher is composed of opposed solid sawtooth lines with a neck design of checkerboards (fig. 7, no. 12).

The use of panels of parallel lines separating sawteeth is reminiscent of designs in the type known as Puerco Black-on-white, although the shape and finish of these vessels is sufficiently in the tradition of Reserve Black-on-white to justify their classification as such. Certainly the "Puerco" influence in Reserve Black-on-white is not surprising. Martin and Rinaldo (1950: 516) illustrate a pitcher that in body design is most similar to these from the Jewett Gap Site. The jar illustrated is not, however, from the Reserve area, but from the purchased collection of the Chicago Natural History Museum. The sherds with it do, however, indicate that the design style can be considered as occurring in the Reserve area. This "Puerco Style" in Reserve Black-on-white is also known from the Springerville area (see Martin and Willis, 1950: 167, #5).

It is not the place of this thesis to argue the position of Reserve Black-on-white in regard to Puerco Black-on-white. Whether they are companion wares, or derived one from the other, is not as important as to record that a high proportion of the Reserve Black-on-white from the Jewett Gap Site showed the influence of the Puerco style of design.

Of all the painted types present at the Jewett Gap Site, only Tularosa Black-on-white occurred in sufficient quantity to attempt detailed analysis and comparison.

Tularosa Black-on-white (Gladwin, 1931: 32-35; Hawley, 1936: 46-47; Nesbitt, 1938: 139; Bluhm, ms.)

Forty-three vessels of Tularosa Black-on-white were identified among the pottery from the Jewett Gap Site. In all essential respects, they do not differ from the Tularosa Black-on-white known from excavations in the Reserve area, and from vessels in the Chicago Natural History Museum purchased from collectors near Springerville, Arizona.

No significant difference was discerned between the shapes of vessels found in the burials and those from the rooms and trash. The apparent emphasis on the jar form in the rooms and trash is attributed to sample size (10 vessels). The only evidence of the presence of the ladle form was one handle from the fill. This is not included in the following list of whole vessels. Shapes are illustrated in figure 5, numbers 1-7. The term 'mammillated jar' was first introduced by Hough (1907: 54).

Tularosa Black-on-white: Distribution of Shapes
Jewett Gap Site

| shape | room and fill | | burial | | total | |
|---|---|---|---|---|---|---|
| | no. | percent | no. | percent | no. | percent |
| jar | 5 | 50 | 9 | 27 | 14 | 33 |
| pitcher | 2 | 20 | 9 | 27 | 11 | 26 |
| bowl | 2 | 20 | 5 | 15 | 7 | 16 |
| duck effigy | 1 | 10 | 4 | 12 | 5 | 12 |
| ring vessel | | | 3 | 9 | 3 | 7 |
| mammillated jar | | | 2 | 6 | 2 | 5 |
| canteen | | | 1 | 3 | 1 | 2 |

Tularosa Black-on-white vessels seem to be smaller and more uniform in size than do culinary vessels of any one type.

Tularosa Black-on-white: Vessel Size
Jewett Gap Site

| shape | range in centimeters (height) | average height in centimeters | modal height in centimeters |
|---|---|---|---|
| jar | 6.0 - 24.0 | 12.0 | 12.0 |
| pitcher | 8.0 - 17.0 | 12.9 | 10.5 |
| duck effigy | 6.5 - 11.5 | 10.0 | 10.5 |
| ring vessel | 5.0 - 12.0 | 7.4 | 10.0 |
| mammillated jar | 5.5 - 9.5 | | |
| canteen | 14.5 (diameter) | | |
| bowl | 7.5 - 24.0 | 17.8 | 17.5 |

Tularosa Black-on-white vessels are, in all forms, greater in maximum diameter than they are in maximum height. Culinary jars tend to be the same in maximum diameter and height.

Plain strap, and bird and animal effigy knob handles are the most frequent. No particular pattern is noted.

Tularosa Black-on-white: Handles
Jewett Gap Site

| | | | |
|---|---|---|---|
| pitchers: | | duck effigies | |
| plain strap | 3 | plain strap | 1 |
| knob | | knob | |
| animal effigy | 4 | animal effigy | 1 |
| bird effigy | 0 | bird effigy | 1 |
| missing | 4 | missing | 1 |
| flattened | 1 | | |
| | | ring vessels | |
| mammillated jar | | plain strap | 3 |
| bird effigy | 1 | | |
| canteen | | | |
| lug loops | 1 | | |

Ticking occurs on over 90 per cent of the rims. The lip is straight, but the shape of the rim shows much variation, even in one vessel. IA2, IA3, IA4, IA6 and IA7 are all represented (fig. 4).

Tularosa Black-on-white, both in its traditional usage and as now defined, includes many styles of design. It is perhaps for this reason

that the most productive analysis of the Jewett Gap Site Tularosa Black-on-white designs came from design motifs, rather than details of elements. A design motif is that design, either element or unit, which is strongest in a pattern and forms the base thereof. (Clearing House for Southwestern Museums News-Letter No. 35: 120).

The most common design motif in the Jewett Gap Site collection is interconnected opposed solid terraces (fig. 5, nos. 2 and 3; fig. 6, no. 3; fig. 7; nos. 17, 19, 20, and 21), which is found on 32% of the Tularosa Black-on-white (14 vessels). It occurred on all shapes except mammillated jars.

On 8 vessels (18.6%) of the collection, compound solid circular scrolls, connected by diamonds, half terraces, or checkerboards, is used as a primary motif (fig. 5, no. 4; fig. 6, no. 4). This is common on duck effigies where the scrolls represent the wings and the breast. On both regular and mammillated jars, four scrolls are used at equidistant points.

Interlocking solid and hatched square scrolls are present, appearing on 9.3% of the vessels (4 vessels), (fig. 6, no. 1). Only pitchers and jars have this motif. The larger jars with constricted necks are limited to this motif.

Solid line zig-zags occur on 3 jars (6.9%). All these jars are small and carelessly painted.

Weaving is represented by 2 pitchers (4.6%), as is the hourglass motif. Bands of opposed solid terraced oblique lines separated by rows of hatched diamonds of stepped squares appears on 2 bowls (fig. 7, no. 18).

One vessel of each of the following motifs occurs: interlocking

solid and hatched circular scrolls (fig. 6, no. 2); nested solid and hatched terraces; solid classic meanders in bands, with fillers of hatched V's; triangular solid scrolls; cribbing (fig. 7, no. 23); horizontal solid stripes (fig. 5, no. 6); solid square scrolls; and hatched stepped squares separated by sawtooth solids.

On all forms except bowls, the primary body design begins just below the base of the neck. In 30 vessels (69.8%) there is a circular top framing line, and the design is applied in a wide continuous band around the body. In 6 vessels (13.9%), the top framing line is rectangular and a quartered layout is used for the design. The latter occurs in 1 mammillated vessel, 2 jars, 2 duck effigies and 1 canteen.

The design layout in 3 bowls (6.9%) is quartered and in 4 (9.3%) is a continuous band.

A circular framing line is used at the base of the body design in 15 vessels (35%). A line forming a star, with from 4 to 11 points, appears on 8 of the vessels (18.5%). In 3 of the bowls the base design forms a square (6.9%). In 16 vessels (37.2%) there is no basal framing line and the design ends in an indefinite cessation of the pattern. The one remaining vessel is too worn to discern the design ending.

There is no correlation between the type of design used on the neck of jars, pitchers and effigies, and the motif of the body design. The neck design on 18 vessels (42%) is opposed half terraces (fig. 5, nos. 2 and 5). These can be either solid or open; frequently both occur on one vessel. Triangular scrolls are used on 5 vessels (11.5%). Alternate panels of vertical and horizontal solid lines appear on 3 vessels (7%), (fig. 7, no. 21). The neck designs of the remaining 10

vessels are all different.

The Jewett Gap Site is the earliest Tularosa Phase site yet excavated from which a sufficient sample of Tularosa Black-on-white has been recovered to do meaningful design motif analysis on whole vessels.

The larger samples of Tularosa Black-on-white are now in purchase collections of museums. Two of the best, perhaps, are the Scorce Collection in the Arizona State Museum and the purchased collection of the Chicago Natural History Museum. The following attempts to utilize the Chicago Natural History Museum's purchased collection from the Springerville area (see Chapter One). The purchased collections may be thought to have come in a large part from late Tularosa Phase sites because collectors have a proclivity to dig in large ruins, and during the Tularosa Phase, large ruins are synonomous with late ruins.

It is perhaps unwise to compare the products of pot-hunting with those of scientific excavation. As an experiment, the design motifs and shapes of 306 Tularosa Black-on-white vessels in the Chicago Natural History Museum were compared with the Tularosa Black-on-white vessels of the Jewett Gap Site. These collections differed strikingly. The change in emphasis between these collections may reflect differences between an early aspect of Tularosa Black-on-white (Jewett Gap Site) and a later aspect of the same type (the Chicago Natural History Museum collection).

The Jewett Gap Site Tularosa Black-on-white does not vary in content from the Tularosa Black-on-white purchased collection in the Chicago Natural History Museum. There is, however, a striking difference in the percentage of occurrence of shapes and design motifs between the

Tularosa Black-on-white of the purchased collection and that of the Jewett Gap Site.

The combined percentages of jars and pitchers is in both cases about the same. Pitchers are, however, far more common in the 'late' purchased collection. Handles seem to be increasing in popularity. Bowls seem to be more common at the Jewett Gap Site. This can be explained by the increasing importance of St. Johns Polychrome bowls in the later Tularosa Phase sites. The duck effigy and ring vessel shapes appear to be more frequent at the Jewett Gap Site, but are less elaborate. The increase of ladles in the purchase collection is inexplicable.

Tularosa Black-on-white: Vessel Shape
Percentage of Occurance

| Shape | Jewett Gap Site N - 43 | Chicago Natural History Museum Purchase Collection: * N - 306 |
|---|---|---|
| jar | 33 | 12 |
| pitcher | 26 | 46 |
| bowl | 16 | 8 |
| duck effigy | 12 | 4 |
| canteen | 7 | 6 |
| ring vessel | 5 | 1 |
| ladles | (one handle) | 20 |
| other | - | 3 |

* (after Bluhm ms.)

Rather striking differences can also be seen in design motifs. The majority of the vessels at the Jewett Gap Site are of 2 motifs, opposed solid terraces (fig. 6, no. 3), and solid circular compound scrolls (fig. 6, no. 4). These are three times as popular at the Jewett Gap Site as in the purchased collection. Interlocking hatched and solid circular scrolls (fig. 6, no. 2) and interlocking hatched and solid square

scrolls (fig. 6, no. 1) do not appear with frequency at the Jewett Gap Site but are numerous in the purchased collection. At the Jewett Gap Site, solid design elements predominate over the hatched and solid of 'classic' Tularosa.

Tularosa Black-on-white: Most Frequent Motifs

| Design Motif | Percentage of occurrence Jewett Gap Site N-43 | Chicago Natural History Museum Purchased Collection N - 306 * |
|---|---|---|
| opposed solid terraces | 32 | 9 |
| interlocking hatched and solid square scrolls | 9 | 16 |
| interlocking hatched and solid circular scrolls | 2 | 14 |
| weaving | 5 | 4 |
| solid triangular scrolls | 2 | 4 |
| solid terraces separated by hatched squares | 2 | 4 |
| solid circular compound scrolls | 19 | |
| solid zig-zags | 7 | |

* (after Bluhm ms.)

Comparison with a picture in the Hough report of a collection from the Delgar Ranch seems to show more similarity in the Delgar Ranch pottery to that of the purchased collection (Hough, 1907; Plate 7). The Delgar Ranch is, from surface indications, a much larger and a much later site than Jewett Gap Site.

Again, it must be stressed that these speculations rest on very shaky foundations. In the Reserve area large, late sites (as the Delgar Ruin) (Hough, 1907, Plate 7) seem to differ from the Jewett Gap Site. Both are burial collections in part. Secondarily, there are differences between the Jewett Gap Site and the purchased collections in the Chicago Natural History Museum. The latter, and the Delgar Ranch, seem similar.

On the basis of these similarities and differences, it is postulated that the predominance of solid elements at the Jewett Gap Site represent an early aspect in the development of Tularosa Black-on-white.

These changes might be a product of geographic isolation at the Jewett Gap Site. This is doubted, in that the unpainted wares and the constellation of types present at the Jewett Gap Site indicate a close parallel development with the Reserve Area.

Several features that appear to be of significance occur in more than one of the painted types. One of these is glaze black paint. It is found in 2 Tularosa Black-on-white pitchers, a St. Johns Black-on-red pitcher and a Springerville Polychrome bowl. The use of glaze does not seem to occur in the Tularosa and San Francisco River Valleys before the beginning of the Tularosa phase, but is earlier in the Forestdale region (E. W. Haury, personal communication).

Another is the use of external white paint which does not become popular in this region before the beginning of the Tularosa Phase. Occasional Reserve Black-on-white sherds are found with exterior white designs at Pine Lawn, but are much more common in the west (Danson, personal communication).

In connection with western influences, it should be observed that there is no Roosevelt Black-on-white at the Jewett Gap Site (Gladwin, 1931: 37). Those criteria of design and shape (no effigy handle, circular base framing line, straight line design on neck) that have been used to distinguish Roosevelt Black-on-white from Tularosa Black-on-white are present, but do not occur together consistently. Comparison of the Jewett Gap Site Tularosa Black-on-white with the Roosevelt Black-on-white

from the Gila Pueblo collection (now at the Arizona State Museum) showed a distinct difference in surface color. This may be further evidence that a change in clay source as the Tularosa tradition moved west, along with selection of certain of the Tularosa characteristics, resulted in Roosevelt Black-on-white.

Tularosa style of design is noted in such types as Pinto Polychrome in the Salado area. It may be that the movement of influences (or people!), as traced by pottery styles, first shows a western influx into the Tularosa Valley (white exterior and glaze paint), followed by a spread to the west resulting in Roosevelt Black-on-white and effects on Roosevelt Red Ware (Colton and Hargrave, 1937: 86-91).

Painted types - summary

Design motifs formed the most meaningful basis for analysis of the painted types at the Jewett Gap Site. There was some correlation between pottery types and vessel shape. Basically, the findings can be summarized:

1. The vessel shapes of Starkweather Smudged Decorated and Reserve Smudged were similar.

2. The vessel form of Tularosa White-on-red was the same as that of Tularosa Fillet Rim.

3. The exterior design of Springerville Polychrome and Tularosa White-on-red at the Jewett Gap Site were almost identical.

4. "Puerco" influences can be seen in Reserve Black-on-white and perhaps on 2 Tularosa Black-on-white vessels; the influence in the latter case consists of the use of checkerboards, a common element in

in Puerco Black-on-white.

5. Design motif similarity can be traced through Tularosa Black-on-white, St. Johns Black-on-red, Springerville Polychrome and Wingate Black-on-red. This similarity is what is known as the "Tularosa style". It consists primarily of three design motifs - interlocking hatched and solid circular scrolls, interlocking hatched and solid square scrolls, and solid terraces separated by hatched squares. The latter is often found in Wingate Black-on-red and Springerville Polychrome. At the Jewett Gap Site these "Tularosa Style" design motifs were not common in Tularosa Black-on-white, but were displaced by solid elements - primarily the motifs opposed solid terraces, and solid circular compound scrolls.

6. Bowls of Wingate Black-on-red, Reserve Black-on-white and Tularosa Black-on-white are similar in shape at the Jewett Gap Site. The Tularosa Black-on-white bowls in the Chicago Natural History Museum purchase collection frequently are of a shape more similar to St. Johns Polychrome. When considered along with evidence of design motifs, this is further evidence that the Tularosa Black-on-white at the Jewett Gap Site may be of an early type. "Tularosa style" may well have been widespread and popular in black-on-red types before it became popular as a style on Tularosa Black-on-white.

Dating: Ceramic Comparisons

Dating a site, in the absence of absolute dates, can best be accomplished by placing the site into an existing arbitrary sequence. The most comparable one in the case of the Jewett Gap Site is the phase system as applied to the Reserve area.

Even when some method of absolute dating has been used on a site, temporal placement by other criteria is a valuable means of checking the reliability of the several means of dating.

Cross dating by means of trade pottery is perhaps the most frequently used comparative dating method in southwestern archaeology. It has been used to date the Reserve and Tularosa Phases in the Reserve area. Detailed lists of trends in ceramic popularity through time have also been used for dating purposes by Martin and his coworkers (Barter, ms.).

Only whole vessels are present in the Jewett Gap Site collection. It is impossible, therefore, to utilize sherd popularity trends. The presence and absence of guide types alone can be used in placing this site in proper temporal perspective.

From work in the Reserve area, five types have been decided upon as the arbitrary guide posts to the Tularosa Phase (Barter, ms.). Unless these five types are present, a site is not considered to be of the Tularosa Phase.

Tularosa Patterned Corrugated
Tularosa Fillet Rim
Tularosa Black-on-white
Tularosa White-on-red
St. Johns Polychrome

As all of these types are present at the Jewett Gap Site, under the criteria for phase designation as used in the Reserve area, the site

ceramically is of the Tularosa Phase (Table 5).

Certain Reserve Phase components are present in the Jewett Gap Site.

1. Reserve Smudged is common and has not yet been replaced as a cooking bowl by Tularosa Fillet Rim.

2. Reserve Punched Corrugated, not found in the Reserve area, Tularosa Phase sites, is present.

3. Reserve Neck Plain Corrugated and Reserve Neck Indented Corrugated are present. Both of these are considered to be more typical of the Reserve Phase, although the evidence is absolutely clear (pp. 21 - 22).

In addition, there are factors that indicate that the Jewett Gap Site was not yet fully evolved into the Tularosa Phase.

1. St. Johns Polychrome (as represented here by Springerville Polychrome) and Tularosa White-on-red are not abundant.

2. Tularosa Black-on-white, while present in considerable numbers, appears to be of an early design style. As Tularosa White-on-red and St. Johns Polychrome are thought to be later in development than Tularosa Black-on-white, Tularosa Patterned Corrugated and Tularosa Fillet Rim. (Barter, ms.), the presence of the latter types in larger numbers than the former is consistent.

All these factors indicate that the Jewett Gap Site was of early Tularosa Phase times. This is not to deny that it may have been occupied during the latter portion of what archaeologists term the Reserve Phase. To admit that possibility does not imply that there was a break in occupation, temporally or culturally.

Attempts to seriate the rooms and burials by pottery inclusions were conspicuously unsuccessful.

No data was available at this time on the whole pottery recovered from a particular Tularosa Phase Site in the Reserve area. Therefore, a composite list of types to be expected in a Tularosa Phase site was used for comparisons (Barter, ms.).

A presence and absence chart was prepared comparing the pottery of the Tularosa Phase in the Reserve area with the whole pottery from Arizona W:10:37 and the Jewett Gap Site (Table 7). The drawbacks of such charts are obvious; they do not indicate how frequent any one trait is in the areas under comparison. Table 7 is used with reservations, but seems to indicate that the Jewett Gap Site is early Tularosa Phase, while Arizona W:10:37 is late in the same phase.

In the Reserve area, the Tularosa Phase is thought to have begun about A.D. 1100. It is to be stressed that the date is arrived at through ceramic features alone without reliance on any tree ring dates (Barter, ms.).

On the basis of dating in the Reserve area, and comparisons of pottery presence in Jewett Gap Site and the Reserve area, a date A.D. 1100-1125 is assigned to the Jewett Gap Site.

Dating: Tree Rings

Tree ring dates are available for the Jewett Gap Site. A few words of caution are advisable before accepting these dates as conclusive evidence of the temporal span of the Jewett Gap Site.

First, the dates were done by the Gladwin system of dating. There are apt to be discrepancies between these and dates obtained by the

Laboratory of Tree Ring Research at the University of Arizona.

The Jewett Gap Site is in the continental divide area. A chronology for this region which can satisfactorily be used for dating purposes has not yet been established. The Laboratory of Tree Ring Reasearch has been unwilling to publish any dates for the continental divide region, throwing some doubt on the validity of the Jewett Gap Site dates.

Even though the dates Gladwin and his associates obtained may be absolutely, technically correct, there are other difficulties. The list of specimens available to me does not give exact provenience of each, other than to list them as "general digging" or by room number. No location is given within the room, and it is impossible to ascertain whether the specimen is from fill, structural portions of the room, or firepit wood. To compound the difficulty, dates are given for one room not excavated, and it has been impossible to tell from what room these specimens have come. In these circumstances, even though the dates obtained may be correct, they are difficult to interpret.

A summary of the 78 dates from the Jewett Gap Site is given in Table 8. They are listed both by year and by room.

It is sufficient to say that the majority of the dates seem to cluster in the 1070's, 1080's and 1090's, with earlier dates indicating that there may have been some occupation at the Jewett Gap Site during the latter half of the eleventh century.

Dating: summary

Dates obtained by the comparison of the ceramic complex of the Jewett Gap Site with the Reserve Area indicate that the Jewett Gap Site

may have been occupied in the early portion of the twelfth century (c. A.D. 1100-1125).

Tree ring dates show a span of A.D. 1039-1099 with the majority in the last three decades of the eleventh century. As there is no indication of the provenience of the specimens dated, it is impossible to state whether these dates should be considered as occupation or building dates.

It must be remembered that the dating of the Reserve area Tularosa Phase was not based on tree ring dates, and that extention of these dates to the Jewett Gap Site may further compound any error. But then, the tree ring dates given for the Jewett Gap Site were obtained by a system that is not currently in high repute. The dating of the Jewett Gap Site is a far from settled issue.

# Chapter Four

## Functional Analysis and Ceramic Associations

### Burial Patterns

The skeletal material from the Jewett Gap Site was not studied, nor is the whole collection available. The field notes do include estimates of age and sex for about 75% of the burials. This material is used here, uncritically, in an attempt to ascertain burial patterns, especially in regard to the distribution of pottery.

There were 60 burials uncovered; 52 were found in the trash (83.9%), 9 under the floors of rooms (14.3%), and 1 from a pit-kiva (1.6%).

Most of the burials were loosely flexed. A very small number of extended and fully flexed burials were present. The majority of the individuals were on their backs, with an occasional one laid on his side. The head was oriented towards the east or east-north-east in every instance. The position of the body is not apparently related to the age or sex of the individual.

In the Starkweather report, Nesbitt (1938: 50) indicates that the 52 pueblo burials he uncovered were not oriented in a constant direction. No information on orientation is included for individual burials, nor are north-arrows included in burial photographs.

Martin and Rinaldo (1949: 27) report 3 burials from the Reserve Phase, all oriented east. The reported lack of orientation in his Starkweather burials seems highly dubious.

The Starkweather Ruin burials were all either loosely flexed, semi-flexed or extended. They were placed both on their backs and sides. No indication is given on the frequency of these positions although he does indicate that only child burials were extended. The child burials at the Jewett Gap Site were, like adult burials, usually loosely flexed.

Less than 20% of the Jewett Gap Burials had material other than pottery with them. The number and kind of these grave goods had no definite correlation with the age and sex of the individual, nor the amount of pottery present in the grave. When present, these non-pottery offerings consisted primarily of beads, bracelets or pendants.

At Starkweather Ruin "In addition to pottery, many other objects were found with the dead" (Nesbitt, 1938: 55). However, from his burial associations, only 21% of the burials had objects other than pottery associated with them. This is most similar to the pattern at the Jewett Gap Site. Nesbitt also states "Jewelry offerings were more common with adults than with children" (Nesbitt, 1938: 55). No pattern of this type could be discerned at Jewett Gap Site; indeed, beads are slightly more frequent with children.

The pottery in the graves at the Jewett Gap Site was arranged around the body, usually near the head or shoulders. There is a slight tendency to place more vessels to the left than to the right of the individual although this is far from uniform. At Starkweather Ruin, "Pottery was placed..rather haphazardly except for the head region which was either covered with an inverted bowl or resting in one" (Nesbitt, 1938: 54). This is not mentioned in field notes from the Jewett Gap Site,

nor does it show in the photographs available.

There is no correlation at the Jewett Gap Site in the number of vessels per burial with age or sex. The number of vessels in a single grave ranges from 0 to 22. The pattern is to include 2 or 3 vessels per individual. More than one vessel is included in 77.8% of the burials, while 60% have 3 or less. The burial containing 22 vessels is an adult male. Starkweather Ruin (Nesbitt, 1938) averaged 3 vessels per burial.

Bowl and jar forms are usually both included in one grave at Jewett Gap Site (73%). One burial has a lone Tularosa Black-on-white bowl. No other has all painted vessels. The individuals buried with the larger number of pots are more likely to have at least one painted vessel included. This may be an indication that painted pottery and large numbers of pots in a grave are wealth or prestige symbols. It may simply show that the more vessels there are, the greater the chance of at least one painted vessel being included.

There are several indications in the Jewett Gap Site burials that the pottery in an individual's grave was used by him (or his household) during his lifetime. The vessels from the rooms and trash do not show any greater percentage of wear than do those from the burials. This is true for both painted and culinary types. Pottery was not made especially for burial inclusions. This is in direct opposition to Nesbitt's constant implications that burial pottery at the Starkweather Ruin was ceremonial in nature and made primarily for burials (Nesbitt, 1938: 54-55).

Every burial at the Jewett Gap Site for which the sex of the

individual is known had at least 1 vessel darkened by use and is presumed to be a cooking utensil. In female burials, 40% of the vessels are darkened by use. Male burials, on the other hand, have only 26% of the vessels that show evidence of use in cooking.

It may be that the vessels in some burials were made by the same person. Four Tularosa Patterned Corrugated vessels are found in burial 38, far above the expected chance occurrence. Only 2 vessels in the collection have indentations formed by incisions. Both are in burial 8. The San Francisco Red and Tularosa Black-on-white jars from burial 21 are almost identical in shape. Burial 50 had 4 black-on-red bowls, the only black-on-reds in the collection.

Among the culinary types, there is a tendency for vessels with adolescent and child burials to be poorly finished. Those painted vessels that were most difficult to assign to a type were also from child and adolescent burials. All miniatures were with burials of children and infants when there was any indication of age.

All this is indicative of the fact that the pottery placed with a burial was that which had been in intimate association with the deceased during the individual's lifetime.

The eccentric shapes (duck effigies, ring vessels, and mammillated jars) seem to have a definite association with age and sex. Of the 4 duck effigies found with burials, 2 were with adult females and 2 were with children under 6 years of age. A mammillated jar was also found with 1 of the children. One ring vessel was from a burial of an adolescent of undetermined sex, 1 with an adult, sex unknown, and the 3rd from a child of around 6 years of age. From the distribution of sex and age in

the total sample, a random selection would include 3 male adults in a group this size, but as far as the sex estimates go, there are no males. This would seem to be strong indication that some selective factor is operative.

There is no indication of function in the form of duck effigies, ring vessels, or mammillated jars. Most of them show signs of wear, both on the base and around the rim.

The seeming correlation between these eccentric forms and female and child burials may find its explanation in speculations by Martin and Rinaldo on the Mogollon social organization (1950: 568). They feel that during the latest phases of the Mogollon occupation in the Reserve area, matrilineal organization was probable.

The association of ducks with females, and females with the probable matrilineal organization of the Mogollons, would in turn imply that the duck effigies are some type of paraphenalia associated with social organization.

Burial patterns: summary

Jewett Gap burials are usually loosely flexed, on their side, and oriented towards the east. Two or 3 pots are usually included. These may be either painted or unpainted. Both a bowl and a jar are usually included.

The pottery in a grave was probably used in the household during an individual's lifetime. Evidence for this includes: the great percentage of worn vessels in burials, and the inclusion of vessels darkened by cooking fires in most burials. Another observation was that more use-darkened vessels occur in female than male burials.

There are indications that several of the vessels included in one grave may have been made by the same person. Child burials are usually found with poorly made vessels, while often 2 or more vessels of a rare type are found in one grave.

Eccentric forms of Tularosa Black-on-white are found only in women's and children's graves. They may be ceremonial paraphenalia associated with matrilineal social organization.

Use of Pottery at Jewett Gap Site

The large sample of pottery from the Jewett Gap Site suggested an attempt to correlate archaeological pottery types with the functional classifications of the prehistoric inhabitants. The amount of wear shown on a vessel, and the darkening of the exterior from use (as would occur when a pot was placed over a fire) shows a significant difference for both bowl and jars, as well as for "types" recognized by archaeologists.

| Culinary types | Bowls | | Jars | |
|---|---|---|---|---|
| | % worn | % use-darkened | %worn | %use-darkened |
| Reserve Ind. Corr. | 40 | 18 | 40 | 75 |
| Reserve Plain Corr. | 50 | 10 | 0 | 40 |
| Alma Plain | - | - | 75 | 0 |
| Tul. Patt. Corr. & Tul. Patt. Corr. R. var. | 10 | 0 | 0 | 0 |
| Reserve Smudged | 63 | 63 | | |
| Tul. Fillet Rim | 75 | 22 | | |
| San Francisco Red | - | - | 100 | 0 |

From this, it would appear that the following were used most frequently for cooking:

Reserve Indented Corrugated jars
Reserve Smudged bowls
Reserve Plain Corrugated jars

Types that may have been used primarily for storage and serving

vessels, and only occasionally for cooking were:

Tularosa Fillet Rim bowls
Reserve Plain Corrugated bowls
Reserve Indented Corrugated bowls.

A high percentage of Tularosa Fillet Rim bowls showed wear, but apparently were not primarily used for cooking.

In the Reserve area, indication of types used for actual cooking is found in rooms that apparently were rapidly deserted (Barter, ms.). In 2 of these rooms, Reserve Indented Corrugated jars and Tularosa Fillet Rim bowls were found around the firepit. Inspection of a small random sample of Tularosa Fillet Rim bowls from the Chicago Natural History Museum's excavations in Tularosa Phase sites in the Reserve area showed a high proportion of this type to be use-darkened. It seems evident that Reserve Smudged bowls had been replaced by Tularosa Fillet Rim bowls as cooking vessels in the Reserve area. As the Reserve area Tularosa Phase sites are considered later in time than the Jewett Gap Site, this may indicate a switch in popularity through time rather than a geographic difference.

Alma Plain jars show a high percentage of wear but no use-darkening. These may have been used for water containers or dry storage.

San Francisco Red jars all show wear, but none are fire blackened. These, due to their narrow necks, are probably water jars.

Patterned Corrugated vessels show little wear and no indication of use for cooking. Nipple and indented bases are found most frequently on those types that appear not to have been used directly over the fire.

Among the historic Yuman tribes, there is a definite correlation of shape and function of pottery. A wide, outflaring bowl is used for

serving and an incurved bowl for cooking (Forde, 1931: 123). At the Jewett Gap Site, Reserve Smudged bowls, which seem to have been most frequently used for cooking, differ slightly in modal shape from bowls of other types (Table 3). Even when bowl shapes 2 and 3 (fig. 3), the modal shapes in Reserve Smudged, occur in other pottery types, upwards of 75% of those shapes are use-darkened, even when only about 20% of the type as a whole shows evidence of use as a cooking bowl. This adds evidence to the speculation that an incurved bowl was considered the proper shape with which to cook over an open fire. It may be a reflection of an idea similar to that of the Yumans.

Mention has been made of the separation of Reserve Indented jars into large jars, found in rooms and trash, and smaller jars, found in burials. There is no difference between these shapes in amount of use-darkening although there is some indication that larger jars may be set into the floor after they are broken and used as storage places.

No use-darkening was noted on any of the painted vessels. About 50% of the Tularosa Black-on-white vessels were worn. Rim wear was most frequent on small pieces, particularly the duck effigies. A Tularosa Black-on-white jar was found in pit-kiva E, inside a larger storage jar. In removing stored vessels from a container like this, there is a possibility the rim might be worn by scraping against the larger vessel.

Pottery use: summary

There was an apparent correlation between archaeological pottery types and wear and use-darkening of vessels. This indicated that at the Jewett Gap Site Reserve Smudged bowls and Reserve Indented Corrugated jars

were used primarily for cooking. Other types seem to be serving or storage vessels.

Incurved bowls appear to be used for cooking while straight sided and outcurved bowls may have been serving bowls.

# Chapter Five
## Summary and Conclusions

Summary:

The whole pottery from the Jewett Gap Site in west-central New Mexico was analyzed both in regard to gross technological features and probable function of pottery in the prehistoric culture.

Technical features of vessel shape, size, and decoration when tabulated showed a great similarity with the Reserve area to the south. When compared with the Point of Pines Tularosa Phase, to the south and west, these likenesses were less striking. There was, however, more similarity between Point of Pines, Arizona W:10:37, and Jewett Gap Site than between Arizona W:10:37 and the Reserve Area. This may be more apparent than real, as whole vessels were used for comparison at Jewett Gap Site and Arizona W:10:37, while the Reserve Area comparisons were based on sherd samples from several sites.

When comparisons were made between Tularosa Black-on-white at the Jewett Gap Site and a purchased collection of the same type at the Chicago Natural History Museum, again differences were noted. This has been tentatively attributed to a temporal difference between the collections.

Two means of dating were available for the Jewett Gap Site. First, the entire ceramic complex was compared with that of the Reserve area. The Jewett Gap Site was of the Tularosa Phase, but because of the presence of some earlier Reserve Phase components, was placed early in the phase (A.D. 1100-1125). Tree ring dates from Jewett Gap, by the Gladwin method,

cluster between A.D. 1070-1099. Neither of these assigned temporal ranges can be considered conclusive, as the evidence upon which they are dated may have been misinterpreted. Much more accurate comparisons with the Reserve area would have been possible had the sherd material recovered from the Jewett Gap Site been available.

Burials were placed with the head oriented towards the east, on the back or side and loosely flexed. Less than 20 per cent of the graves had offerings other than pottery. Two or 3 pots were usually placed with each burial, although the range is as high as 22. A bowl and a jar, one of which was a cooking vessel, were commonly included and placed near the head. Female burials had on an average more use-darkened vessels than male. There is some evidence that the pottery with a particular burial was made by one individual.

Eccentric forms of Tularosa Black-on-white were buried with infants and females. This may indicate that these forms were paraphernalia connected with a matrilineally organized society.

When patterns of wear and use-darkening of the pottery were analyzed, it was found that some of the "artificial" archaeological types coincided with the prehistoric cooking vessel types. Reserve Smudged bowls, Reserve Plain Corrugated and Reserve Indented Corrugated jars had much higher incidence of use-darkening than other types of pottery.

There is evidence that a slightly incurved bowl was most frequently used for cooking. Indented and nipple bottoms seem to be associated with serving and storage vessels.

Conclusions:

Those problems that instigated the original excavation of the Jewett Gap Site centered around dating St. Johns Polychrome, Tularosa Black-on-white, and Reserve Black-on-white. These original questions have not been answered by the current research. The lack of both sherds and reliable tree ring dates, with proveniences exact enough for successful interpretation, makes it impossible to isolate and date sections of the pueblo with the degree of accuracy necessary to delineate the time span of a particular pottery type.

The relationships between Tularosa Black-on-white, St. Johns Black-on red, and St. Johns Polychrome still remains a matter of some importance. The design motifs in all 3 are similar enough to suggest manufacture in the same area. At the Jewett Gap Site, however, a variant of Tularosa Black-on-white, with solid design elements, predominated over the traditional solid and hatched Tularosa style. This has been tentatively suggested as an early developmental style of Tularosa Black-on-white. An alternative suggestion is that solid elements are a local specialization in the Jewett Gap area. The implication in this is that the opposed solid and hatched Tularosa Black-on-white, as well as the St. Johns Black-on-red and Springerville-St. Johns Polychrome, were trade vessels at the Jewett Gap Site. Petrographic analysis on representative pieces of Tularosa Black-on-white of different design motifs might conceivably answer this.

The Reserve Black-on-white present at the Jewett Gap Site showed a high degree of influence from the Puerco style of design. This may indicate affiliations with areas to the north and west. Less of this

Puerco influence seems to be present in the Pine Lawn Branch Reserve Black-on-white (Martin and Rinaldo, 1950b: 533). Were more studies of design motif percentages available, one might be able to draw definite conclusions concerning these influences.

However, it can be stated that the majority of the influences ascertained on the pottery of the Jewett Gap Site come from the west. This western affinity is perhaps greater at the Jewett Gap Site than in the Pine Lawn Branch.

Further contacts with the west are seen in the spread of the Tularosa Black-on-white style of design to the west, during and after the withdrawal from the Tularosa and San Francisco River valleys. As the tradition moves west it is seen in Roosevelt Black-on-white, White Mountain Red Ware, and Roosevelt Red Ware. There are some hints that the tradition may reach the Hopi area. It is in this type of supposition that design analysis coupled with horizon style studies would be of value.

The unpainted types of the Jewett Gap Site proved to be less subject to change than the painted types, with fewer areal differences ascertainable. It may be that less variation occurs in the more utilitarian objects. It was, however, the plain and textured types that gave clear indication of how different types of pottery were used in the prehistoric culture. The correlations devised to isolate prehistoric function should not serve as reconstruction alone, but should also be used for comparisons. Differences in function may eventually prove to be another tool with which to determine close affinities between people, for when a particular pottery type is present in three areas, and is used for cooking in two of them, but not the third, greater contact would be

implied between the two areas where the function is the same.

It is unfortunate that more data does not exist in the literature of ethnology that is applicable to archaeological problems. Variations in form of utilitarian material culture items are seldom studied in living groups. The archaeologist can only theorize that observed correlations between form and apparent differences in use were meaningful to the prehistoric culture. The ethnologist could determine precisely the function of form differences and perhaps shed needed light on archaeological data.

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Table 1 - Distribution of the Jewett Gap Site

Pottery Collection by Type and Provenience

| Type | Room and fill | Burial | Total |
|---|---|---|---|
| Tularosa Black-on-white | 10 | 33 | 43 |
| Springerville Polychrome | 2 | - | 2 |
| Tularosa White-on-red | 1 | 1 | 2 |
| Wingate Black-on-red | - | 3 | 3 |
| St. Johns Black-on-red | - | 1 | 1 |
| Starkweather Smudged Decorated | - | 1 | 1 |
| Puerco Black-on-white | - | 1 | 1 |
| Reserve Black-on-white | - | 7 | 7 |
| Puerco Black-on-red | - | 1 | 1 |
| Total | 13 | 48 | 61 |
| Tularosa Fillet Rim | 10 | 54 | 64 |
| Reserve Indented Corrugated | 12 | 37 | 49 |
| Reserve Indented Neck Corrugated | - | 6 | 6 |
| Reserve Smudged | 6 | 24 | 30 |
| Reserve Plain Corrugated | 2 | 14 | 16 |
| Reserve Plain Neck Corrugated | 1 | 5 | 6 |
| Alma Plain | 1 | 10 | 11 |
| Alma Punched | - | 1 | 1 |
| San Francisco Red | 3 | 1 | 4 |
| Tularosa Patterned Corrugated | - | 7 | 7 |
| Tularosa Patterned Corr., Res. Var. | 2 | 7 | 9 |
| Reserve Punched Corrugated | 1 | 1 | 2 |
| Reserve Incised Corrugated | 1 | 1 | 2 |
| Total | 39 | 168 | 207 |
| Total vessels in collection | 52 | 216 | 268 |

Table 2 - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Modal Shape | Range in Centimeters Height | Range in Centimeters Diameter | Modal Range in Centimeters Height | Modal Range in Centimeters Diameter |
|---|---|---|---|---|---|---|
| Tularosa Fillet Rim | bowls 64 | 7,1*,4* | 13.5-35.5 | 5.0-17.4 | 10.0-14.9 | 20.0-24.9 |
| Reserve Ind. Corr. | bowls 31 | 4 | 7.6-25.0 | 11.9-41.0 | 15.0-19.9 | 10-14.9 |
| | jars 10 | 11 | 10.7-24.1 | 8.3-24.5 | 10.0-14.9 | 10.0-14.9 |
| | 8 | 12 | 22.2-42.2 | 21.5-37.0 | over 30 | over 30 |
| Res. Neck. Ind. Corr. | jars 6 | 11 | 8.2-19.7 | 6.5-18.7 | 15.0-19.9 | 15.0-19.9 |
| Tularosa Patt. Corr. | bowls 6 | 6 | 9.0-20.0 | 18.4-39.0 | 5.0-9.9 | 15.0-19.9 |
| | jars 1 | 8 | 29.5 | 27.5 | - | - |
| Tularosa Patt.Corr. Res. Var. | bowls 5 | 6 | 9.1-15.0 | 10.6-35.5 | 5.0-9.9 | 15.0-19.9 |
| | jars 4 | 11 | 11.7-15.5 | 11.7-17.0 | 10.0-14.9 | 10.0-14.9 |

*common, but less frequent than mode

Table 2 - Cont. - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Number of Corr. per 2 cms. Range | Mode | Modal Rim Shape | Base Indent. | Base Nipple | Smudged Interior | Use-darkened | Worn |
|---|---|---|---|---|---|---|---|---|---|
| Tularosa Fillet Rim | bowls 64 | - | - | IA6, IA7 | 7/64 | - | 63/64 | 13/64 | 44/64 |
| Reserve Ind. Corr. | bowls 31 | 4-9 | 6 | IA3, IA6 | 13/31 | - | 31/31 | 5/31 | 12/31 |
| | jars 18 | 3-8 | 4 | IC2, ID3 | 1/18 | - | 4/10 | 8/10 | 4/10 |
| Reserve Neck Ind. Corr. | | 3-7 | 4 | IB3, IB6 | - | - | 1/10 | 5/8 | 4/8 |
| | jars 6 | 4-8 | 5 | IC2, IC3 | - | - | 2/6 | 3/6 | - |
| Tularosa Patt. Corr. | bowls 6 | 6-9 | 6 | IA6 | 1/6 | 1/6 | 6/6 | - | - |
| | jars 1 | 6 | - | ID2 | - | - | - | - | - |
| Tularosa Patt.Corr. Res. Var. | bowls 5 | 5-9 | 6 | IA4 | - | - | 5/5 | - | 1/5 |
| | jars 4 | 5-8 | 5 | ID3 | - | - | 1/5 | - | - |

Table 2 - Cont. - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Modal Shape | Range in Centimeters Height | Range in Centimeters Diameter | Modal Range in Centimeters Height | Modal Range in Centimeters Diameter |
|---|---|---|---|---|---|---|
| Reserve Plain Corr. | bowls 5 | 1 | 8.0-14.6 | 13.3-24.3 | 5.0-9.9 | 15.0-19.9 |
| | jars 5 | 11,5* | 7.0-30.0 | 5.6-20.0 | 10.0-14.9 | 10.0-14.9 |
| Reserve Plain Corr. Tul. Var. | bowls 6 | 6 | 7.0-12.3 | 11.2-28.0 | 10.0-14.9 | 20.0-24.9 |
| Reserve Neck Plain Corr. | jars 6 | 11 | 8.9-15.6 | 8.5-18.5 | 10.0-14.9 | 15-19.9 |
| Alma Plain | bowls 2 | 6 | 3.7,8.3 | 11.9, 12.9 | 5.0-9.9 | 10.0-14.9 |
| | jars & pitchers 9 | 9,10,13 | 6.3-13.2 | 4.0-12.5 | 5.0-9.9 | 5.0-9.9 |
| San Francisco Red | jars 4 | 9 | 9.0-26.2 | 7.0-25.0 | 25.0-29.9 | 25.0-29.9 |

*common, but less frequent than mode

Table 2 - Cont. - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Number of Corr. per 2 cms. Range | Mode | Modal Rim Shape | Base Indent. | Base Nipple | Smudged Interior | Use-darkened | Worn |
|---|---|---|---|---|---|---|---|---|---|
| Reserve Plain Corr. | bowls 5 | 5-9 | 7 | IA6 | 1/5 | 2/5 | 5/5 | 1/5 | 2/5 |
| | jars 5 | 4-6 | 6 | IC3 | - | - | 1/5 | 2/5 | - |
| Reserve Pl. Corr. Tul. Var. | bowls 6 | 6-9 | 8 | IA3 | 4/6 | 2/6 | 6/6 | - | 2/6 |
| Reserve Neck Pl. Corr. | jars 6 | 4-6 | 4 | IB3 | - | - | - | 2/6 | 2/6 |
| Alma Plain | bowls 2 | - | - | IA2 | - | - | - | - | - |
| | jars & pitchers 9 | - | - | IA2 | - | - | - | - | 7/9 |
| San Francisco Red | jars 4 | - | - | IA7 IA4 IA3 | - | - | - | - | 4/4 |

Table 2 - Cont. - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Modal Shape | Range in Centimeters Height | Range in Centimeters Diameter | Modal Range in Centimeters Height | Modal Range in Centimeters Diameter |
|---|---|---|---|---|---|---|
| Reserve Smudged | bowls 30 | 2,3*,4* | 6.0-15.0 | 9.8-30.2 | 10.0-14.9 | 20.0-24.9 |
| Reserve Punched Corr. | jars 2 | 8 | 13, 15.1 | 12.7, 14.5 | 10.0-14.9 | 10.0-14.9 |
| Reserve Incised Corr. | bowl 1 | 4 | 13.5 | 24.0 | - | - |
| | jar 1 | 13 | 14.6 | 16.0 | - | - |

Table 2 - Cont. - Unpainted Vessels, Jewett Gap Site

| Type | Shape and Sample Number | Number of Corr. per 2 cms. Range | Mode | Modal Rim Shape | Base Indent. | Base Nipple | Smudged Interior | Use-darkened | Worn |
|---|---|---|---|---|---|---|---|---|---|
| Reserve Smudged | bowls 30 | - | - | IA4 | - | - | 30/30 | 19/30 | 19/30 |
| Reserve Punched Corr. | jars 2 | 6 | | ID3 | - | - | - | - | - |
| Reserve Incised Corr. | bowls 1 | 7 | | IA4 | 1/1 | - | 1/1 | 1/1 | 1/1 |
| | jars 1 | 6 | | IC6 | - | - | - | 1/1 | 1/1 |

Table 3 - Location of pottery by burial, including age and sex of burials when known.
(* indicates type identification was made from notes and photographs)

| | Bowls | Jars | Age, Sex |
|---|---|---|---|
| Burial 1 | 1 Tularosa B/W<br>1 Tularosa Fillet Rim | 3 Tularosa B/W<br>1 Tularosa B/W duck effigy | 6 yrs. |
| Burial 2 | 2 Tularosa Fillet Rim | 1 Reserve Indent. Corr.<br>1 Tularosa B/W ring vessel | adolescent |
| Burial 3 | 2 Tularosa Fillet Rim | 1 Tularosa B/W * | M adult |
| Burial 4 | 2 Tularosa Fillet Rim<br>1 Reserve Indent. Corr. | 1 Tularosa B/W | 8 yrs. |
| Burial 5 | 1 Tularosa Fillet Rim | 1 St. Johns B/R | |
| Burial 6 | 1 Tularosa Fillet Rim | | |
| Burial 7 | 2 Tularosa Fillet Rim | | F adult |
| Burial 8 | 1 Tularosa Fillet Rim *<br>1 Tularosa Pat. Cor.,Res. Var. *<br>1 Alma Punched | 1 Reserve Neck Ind. Corr.<br>1 Tul. Pat. Corr., Res. Var.<br>1 Tularosa B/W ring vessel | ? adult |
| Burial 9 | 1 Tularosa Fillet Rim | | |
| Burial 10 | 1 Tularosa Fillet Rim | 2 Tularosa B/W * | |
| Burial 11 | No pottery | | |
| Burial 12 | 1 Tularosa Fillet Rim *<br>1 Tularosa W/R | 1 Tularosa B/W | child |

Table 3 - 2

| | | | |
|---|---|---|---|
| Burial 13 | 2 Tularosa Fillet Rim | 1 Tularosa B/W | |
| Burial 14 | 1 Tularosa Fillet Rim | 1 Tularosa B/W ring vessel | 5 years |
| Burial 15 | 2 Reserve Ind. Corr. *<br>1 Reserve Smudged | 1 Alma Rough<br>1 Reserve B/W | adolescent |
| Burial 16 | 1 Reserve Smudged<br>1 Reserve Plain Corr. | | M adult |
| Burial 17 | No data on pottery | | M adult |
| Burial 18 | 3 Tularosa Fillet Rim<br>1 Reserve Indented Corr. | 1 Tularosa B/W | M adult |
| Burial 19 | | 1 Alma plain | 8 years |
| Burial 20 | 1 Reserve Smudged | 2 B/W ? | boy |
| Burial 21 | 5 Tularosa Fillet Rim<br>2 Tularosa B/W | 1 San Francisco Red<br>1 Tularosa B/W<br>1 Tularosa B/W duck effigy<br>1 Reserve B/W | F adult |
| Burial 22 | 1 Starkweather Smudged Decorated<br>1 Puerco B/W | 1 Reserve neck Ind. Corr. | adult and infant |
| Burial 23 | 1 Reserve Ind. Corr. | 1 Reserve B/W | |
| Burial 24 | 1 Tularosa B/W | | |
| Burial 25 | 1 Tularosa Fillet Rim<br>2 Reserve Ind. Corr. | 1 Tularosa B/W | M adult |

Table 3 - 3

| | | | |
|---|---|---|---|
| Burial 26 | 1 Tularosa Fillet Rim | | adolescent |
| Burial 27 | 3 Reserve Ind. Corr.<br>1 Reserve Plain Corr. Tul. var. | 1 Reserve B/W | |
| Burial 28 | 3 Tularosa Fillet Rim<br>1 Reserve Smudged | 1 Alma Plain<br>1 Tularosa B/W duck effigy | infant |
| Burial 29 | 4 Tularosa Fillet Rim * | 1 Tul. Pat. Corr., Res. var. | M adult |
| Burial 30 | 1 Reserve Plain Corr. Tul. var.<br>1 Tul. Pat. Corr., Res. var. | 1 Reserve Ind. Corr.<br>1 Res. Neck Ind. Corr. | F young |
| Burial 31 | 2 Reserve Smudged<br>1 Alma Plain | 2 Reserve Plain Corr. *<br>1 Reserve Plain neck corr. | adolescent |
| Burial 32 | 2 Tularosa Fillet Rim<br>1 Reserve Ind. Corr.<br>1 Reserve Smudged | 2 Reserve Ind. Corr. * | child |
| Burial 33 | 2 Reserve Ind. Corr. | 1 Alma Plain | adult |
| Burial 34 | | 1 Reserve Ind. neck corr. | child |
| Burial 35 | 2 Tularosa Fillet Rim | 1 Reserve Ind. Corr.<br>1 Tul. Pat. Corr. Res. var. | |
| Burial 36 | 1 Reserve Smudged * | 1 Tul. Pat. Corr. Res. var.<br>1 minature plainware | infant |
| Burial 37 | 1 Reserve Smudged<br>1 Tularosa Fillet Rim | 1 Alma Plain<br>2 Minature Plainware<br>1 Reserve B/W * | infant |

Table 3 - 4

| | | | |
|---|---|---|---|
| Burial 38 | 1 Alma Plain<br>1 Reserve Ind. Corr. *<br>1 Reserve Smudged<br>1 Reserve Plain Corr. Tul. var.<br>1 Tul. Pat. Corr.<br>3 Tul. Pat. Corr., Res. var. | 1 Tul. Pat. Corr., Res. var. *<br>1 Reserve B/W | |
| Burial 39 | 1 Reserve Smudged | | child |
| Burial 40 | 2 Reserve Smudged | 1 Reserve Ind. Corr.<br>1 Alma Plain<br>1 Reserve Plain neck corr. | 10 years |
| Burial 41 | 1 Reserve B/W<br>1 Reserve Smudged | 1 Reserve Incised Corr. | M adult |
| Burial 42 | 1 Tularosa Fillet Rim | | ? adult |
| Burial 43 | 2 Tularosa Fillet Rim<br>1 Tularosa Pat. Corr. | 1 Tularosa B/W<br>1 Tularosa B/W duck effigy | F adult |
| Burial 44 | 2 Reserve Smudged | 1 Reserve Neck Plain Corr. | F adult |
| Burial 45 | 1 Tularosa Fillet Rim | | |
| Burial 46 | 1 Reserve Indented Corr. * | | adult |
| Burial 47 | 2 Reserve Indented Corr. | | |
| Burial 48 | 1 Reserve Ind. Corr.<br>1 Reserve Plain Corr. Tul. var.<br>1 Tul. Pat. Corr. Res. var. | | F adult |

Table 3 - 5

| | | | |
|---|---|---|---|
| Burial 49 | 1 Reserve Smudged<br>1 Tul. Pat. Corr. | | M adult |
| Burial 50 | 3 Reserve Smudged<br>8 Reserve Ind. Corr.<br>1 Reserve Plain Corr. Tul. var.<br>1 Tul. Patt. Corr.<br>1 Tul. Patt. Corr. Res. var.<br>3 Wingate B/R<br>1 Puerco B/R | 1 Reserve Ind. Corr.<br>1 Alma Plain<br><br>1 Reserve Plain neck Corr.<br>1 Reserve Indent. neck Corr. | M adult |
| Burial 51 | no data | | M adult |
| Burial 52 | | 1 Reserve Punched Corr. | M adult |
| Burial 53 | 2 Reserve Smudged<br>2 Reserve Ind. Corr.<br>2 Plain Corr.<br>2 Plain Corr., Tul. var.<br>1 Tul. Patt. Corr. | 1 Tul. B/W | |
| Burial 54 | 2 Tularosa Fillet Rim<br>1 Alma Plain | | child |
| Burial 55 | 1 Tularosa Fillet Rim | 1 Tul. B/W<br>1 B/W (no data) | |
| Burial 56 | 1 Tularosa Fillet Rim | 2 Reserve Ind. Corr.<br>1 Tul. B/W | infant |
| Burial 57 | 1 Tularosa Fillet Rim<br>1 Reserve Indented Corr.<br>1 Alma Plain | 1 Alma Plain<br>1 miniature | infant |

Table 3 - 6

| | | |
|---|---|---|
| Burial 58 | 2 Tularosa Fillet Rim | 2 Reserve Indented Corr.<br>1 Tularosa B/W |
| Burial 59 | 1 Reserve Indented Corr. | 1 Reserve B/W<br>1 Reserve Indented Corr. |
| Burial 60 | No pottery | |
| Burial 61 | 1 Reserve Indented Corr. | 1 Tularosa B/W<br>1 Reserve B/W |
| Burial 62 | 1 Tularosa Patterned Corrugated<br>1 Reserve Smudged<br>1 Reserve Indented Corrugated | 1 Alma Plain |

Table 4 - Location of pottery in rooms

Jewett Gap Site

| | Bowls | Jars |
|---|---|---|
| Room 5, Floor | | |
| | 3 Tularosa Fillet Rim | |
| Room 7, Floor | | |
| | 1 Reserve Smudged | 1 Reserve Indented Corr. |
| | 3 Tularosa Fillet Rim | 1 Tularosa Black-on-white |
| | | 1 ? Black-on-white (no data) |
| Room 10, Floor | | |
| | 1 San Francisco Red | |
| Room 24, Floor | | |
| | 1 Tularosa Fillet Rim | |
| | 3 Minature Alma Plain | |
| Room 32, Probably floor | | |
| | 1 Tularosa Fillet Rim | |
| | 1 Tularosa Black-on-white | |
| Pitkiva A, (Probably fill) | | |
| | 1 St. Johns Polychrome Tularosa Black-on-white Bowl * | 2 Corrugated Ollas * |
| Pitkiva E, Floor | | |
| | 1 Alma Plain Miniature [1.] | 1 Reserve Indented Corr. |
| | 2 Tularosa Fillet Rim [1.] | 2 Tularosa Black-on-white |
| | 1 Tularosa White-on-red [1.] | |
| Pitkiva F, Floor | | |
| | 1 Tularosa Fillet Rim | |

(1. These three bowls were plastered in a mealing bin)

* Indicates type identification was made from notes and photographs.

Table 5 - Pottery Type Occurrence by Phase

| Reserve Area | Jewett Gap Site |
|---|---|
| **Tularosa Phase** | |
| Tularosa Black-on-white | Tularosa Black-on-white |
| St. Johns Polychrome | sherds may be present |
| Springerville Polychrome | Springerville Polychrome |
| Tularosa White-on-red | Tularosa White-on-red |
| Starkweather Smudged Decorated | Starkweather Smudged Decorated |
| Wingate Black-on-red | Wingate Black-on-red |
| St. Johns Black-on-red | St. Johns Black-on-red |
| Mimbres Classic Black-on-white ? | sherds may be present |
| Houck Polychrome | sherds may be present |
| Querino Polychrome | |
| Reserve Black-on-white | Reserve Black-on-white |
| Reserve Plain Corrugated | Reserve Plain Corrugated |
| Reserve Incised Corrugated | Reserve Incised Corrugated |
| Reserve Indented Corrugated | Reserve Indented Corrugated |
| Tularosa Patterned Corrugated | Tularosa Patterned Corrugated |
| Tularosa Patterned Corrugated, Res. v. | Tularosa Patterned Corrugated Res. v. |
| Tularosa Fillet Rim | Tularosa Fillet Rim |
| Reserve Smudged | Reserve Smudged |
| Alma Plain | Alma Plain |
| San Francisco Red | San Francisco Red |
| **Reserve Phase** | |
| Starkweather Smudged Decorated | Starkweather Smudged Decorated |
| Wingate Black-on-red | Wingate Black-on-red |
| Reserve Black-on-white | Reserve Black-on-white |
| Puerco Black-on-white | Puerco Black-on-white |
| Mimbres Boldface Black-on-white | |
| Cerros Red-on-white | |
| Puerco Black-on-red | Puerco Black-on-red |
| Reserve Plain Corrugated | Reserve Plain Corrugated |
| Reserve Incised Corrugated | Reserve Incised Corrugated |
| Tularosa Patterned Corrugated, Res. v. | Tularosa Patterned Corrugated Res. v. |
| Reserve Punched Corrugated | Reserve Punched Corrugated |
| Reserve Fillet Rim | |

Table 6 - Pottery Types in grave or room-floor association with Tularosa Black-on-white: Jewett Gap Site

Tularosa Fillet Rim
Reserve Indented Corrugated
Reserve Neck Indented Corrugated
Reserve Plain Corrugated
Reserve Plain Corrugated, Tularosa variant
Tularosa Patterned Corrugated
Tulatorsa Patterned Corrugated, Reserve variant
Reserve Black-on-white
Alma Plain
Reserve Smudged
San Francisco Red
Tularosa White-on-red

Table 7 - Presence and absence of pottery types at the Jewett Gap Site, Tularosa Phase sites in the Reserve area, and Arizona W:10:37

| Pottery type | Jewett Gap Site | Reserve Area | Arizona W:10:37 |
|---|---|---|---|
| Alma Plain | x | x | x |
| Reserve Plain Corr. | x | x | x |
| Reserve Indented Corr. | x | x | x |
| Tularosa Patterned Corr. | x | x | x |
| Tularosa Patterned Corr. Reserve, variant | x | x | x |
| Tularosa Fillet Rim | x | x | x |
| San Francisco Red | x | x | |
| Reserve Incised Corrugated | x | x | |
| Reserve Smudged | x | x | |
| Reserve Neck Plain Corr. | x | | |
| Reserve Neck Indented Corr. | x | | |
| Reserve Punched Corr. | x | | |
| Tularosa Black-on-white | x | x | x |
| Reserve Black-on-white | x | x | x |
| McDonald Corrugated | | | x |
| Springerville and St. Johns Polychromes | x | x | |
| Tularosa White-on-red | x | x | |
| Starkweather Smudged Dec. | x | x | |
| Wingate Black-on-red | x | x | |
| Mimbres Black-on-white | | x | |
| Houck and Querino Polychrome | | x | |

Table 8 - Tree Ring Dates; Jewett Gap Site
(O'Bryan Notebook)
Determined by O'Bryan and Agawa

Distribution of dates by decade:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1039 | 1044 | 1053 | 1065 | 1070 (2) | 1080 (3) | 1090 (2) |
| | 1049 | 1055 | 1066 (2) | 1071 (2) | 1081 | 1091 (4) |
| | | 1056 | 1069 | 1072 (3) | 1082 | 1093 (2) |
| | | 1057 | 1068 | 1073 (2) | 1083 (2) | 1095 (3) |
| | | 1059 (2) | 1069 | 1074 (2) | 1084 | 1096 (3) |
| | | | | 1075 | 1085 (4) | 1097 (3) |
| | | | | 1076 | 1086 | 1098 (3) |
| | | | | 1077 | 1087 (3) | 1099 (3) |
| | | | | 1078 (2) | 1088 (4) | |
| | | | | 1079 | 1089 (5) | |
| Total for decade 1 | 2 | 6 | 5 | 16 | 25 | 23 |

Distribution of dates by structure:

| Room 4 | Room 2 | Pit-kiva C |
|---|---|---|
| 1079 | 1073 (2) | 1066 |
| | 1080 | 1070 |
| | 1085 | 1078 |
| | 1086 | 1080 |
| | 1088 (2) | 1081 |
| | 1089 | 1082 |
| | 1090 | 1083 |
| | 1096 (2) | 1085 (2) |
| | 1097 (3) | 1088 |
| | 1098 (3) | 1089 (3) |
| | 1099 | 1091 |
| | | 1093 (2) |
| | | 1095 |
| | | 1096 |

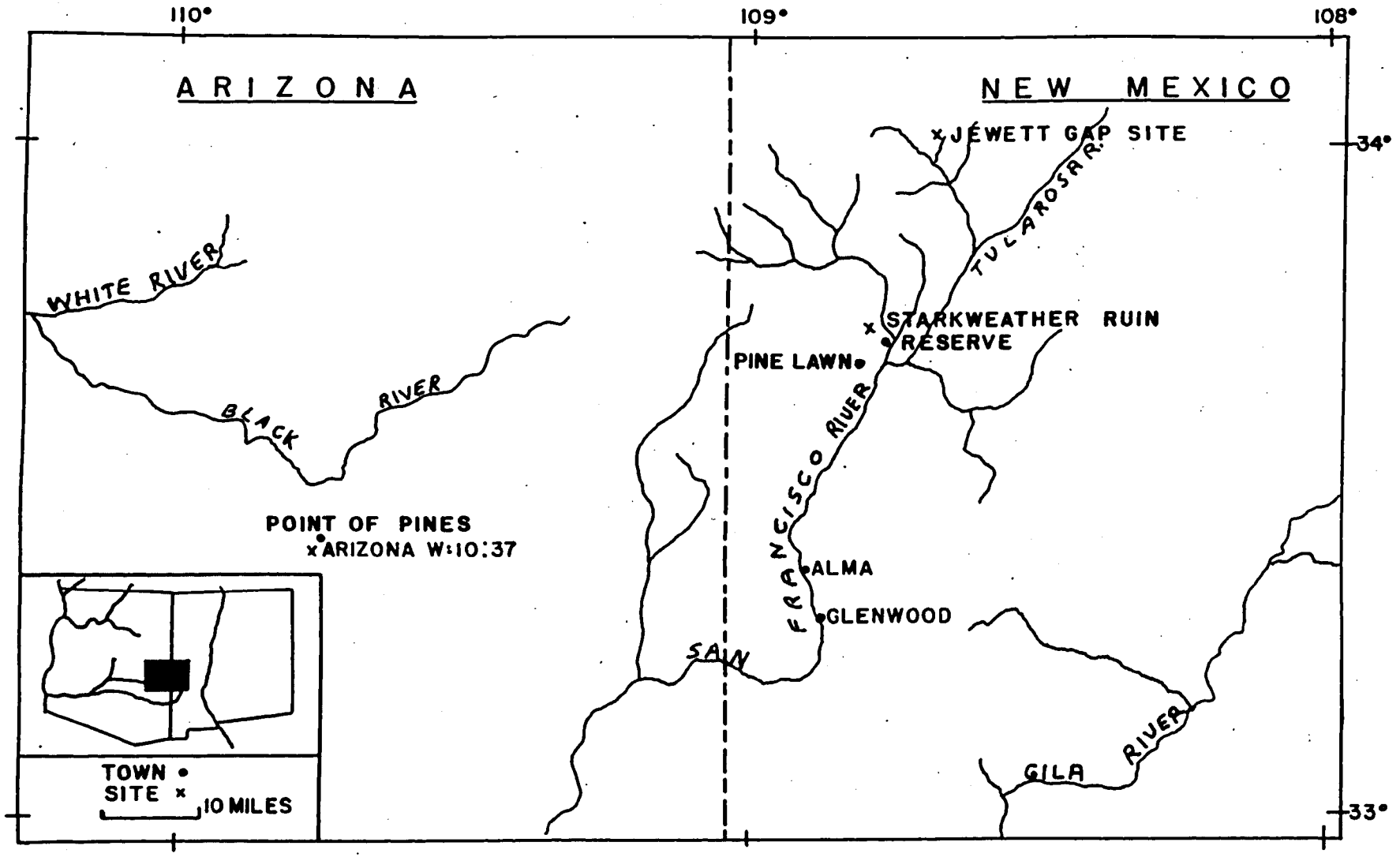



Figure 1. East central Arizona and west central New Mexico: the Jewett Gap Site in relation to Arizona W:10:37, Starkweather Ruin, and the Reserve area.

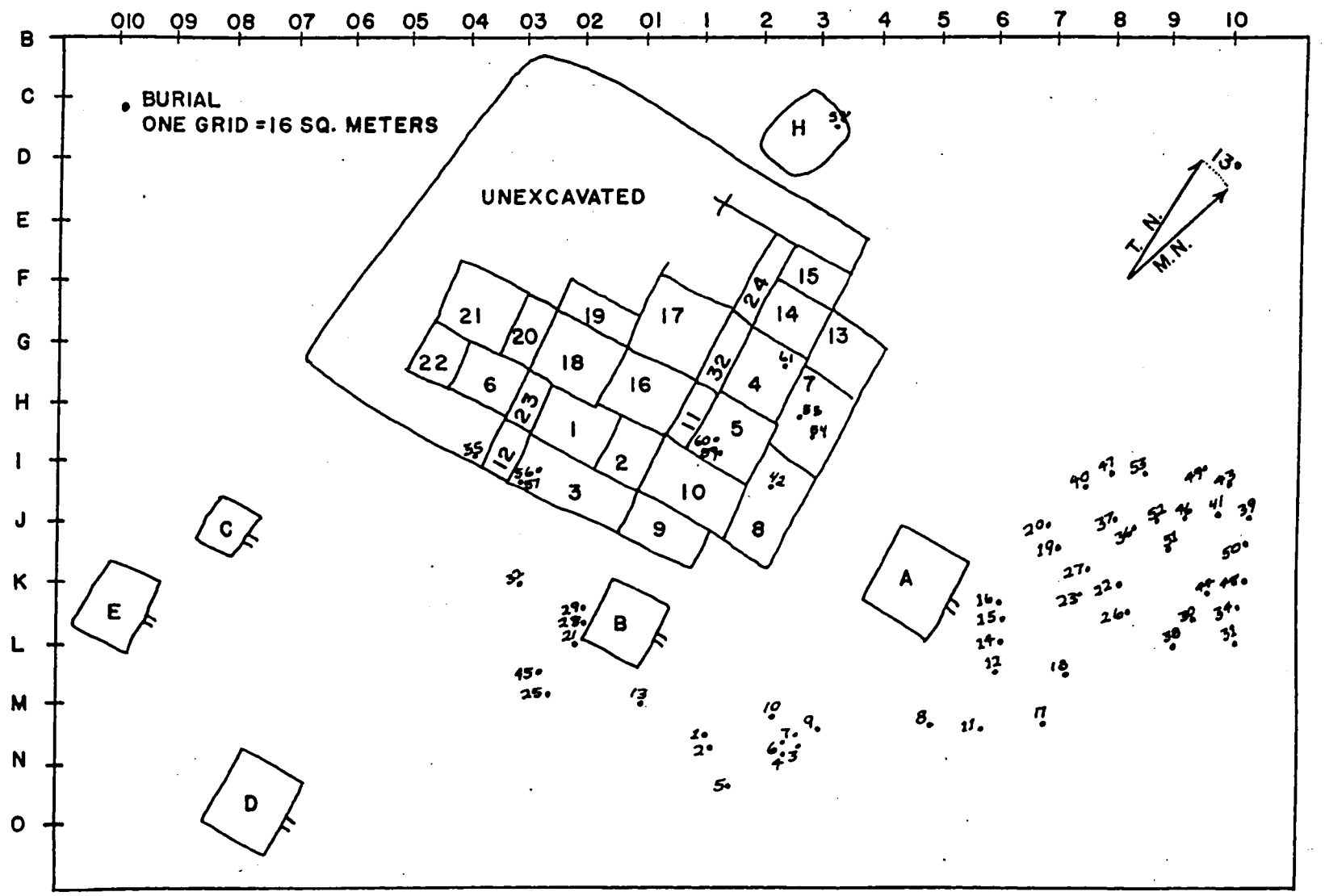



Figure 2. The Jewett Gap Site: location of excavated burials and pit-kivas in relation to the main pueblo.

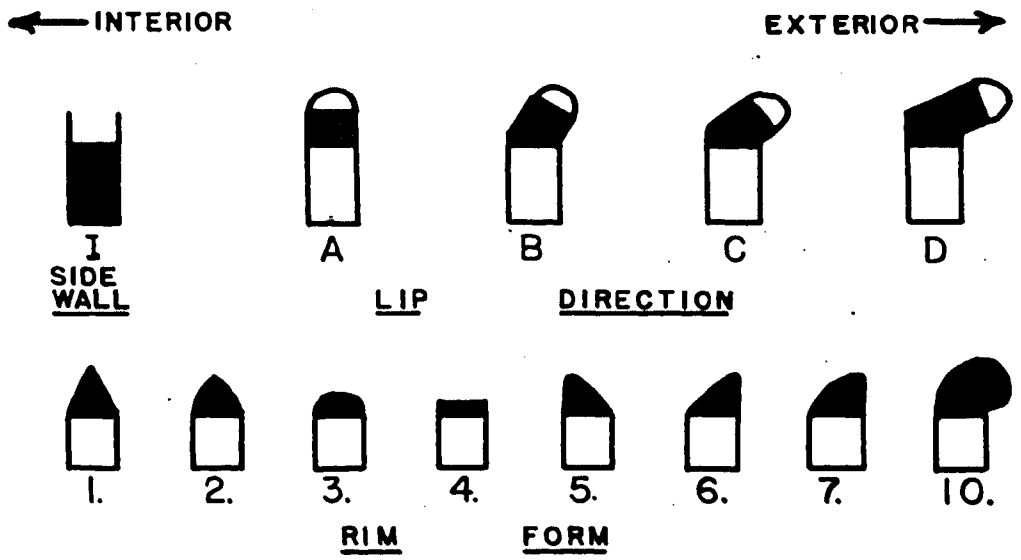



Figure 4a. Key to rim types (after Colton and Hargrave, 1937: 10). Rim shape is determined for the side wall, lip direction, and rim form. The composite code for these three, for example IA3, indicates the rim type.

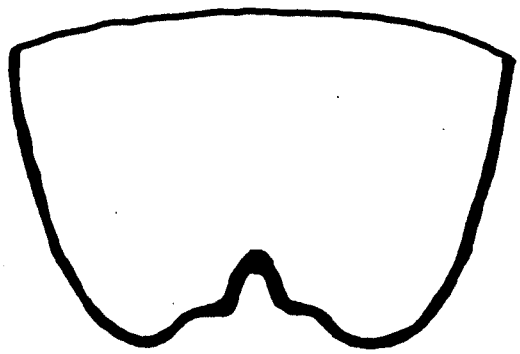


Figure 4b. Cross section through a nipple bottom bowl.


Figure 5. Vessel shapes of Tularosa Black-on-white and Reserve Black-on-white from the Jewett Gap Site. Not to scale. Nos. 1-7, Tularosa Black-on-white. Nos. 8-10, Reserve Black-on-white. 1, bowl; 2, pitcher; 3, canteen; 4, mammillated jar; 5, duck effigy; 6, ring vessel; 7, jar; 8, bowl; 9, pitcher; 10, pitcher.

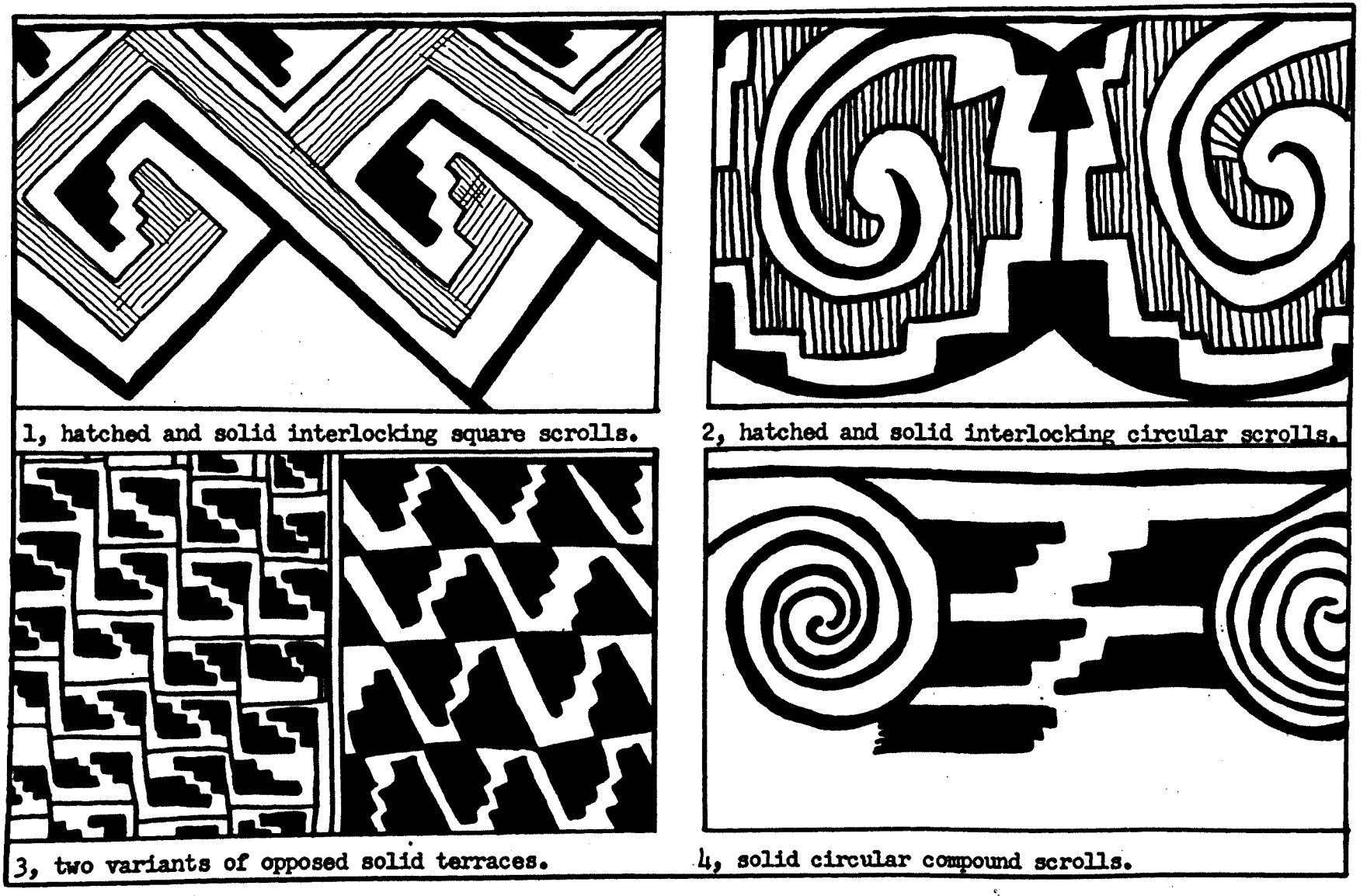



Figure 6. Major design motifs on Tularosa Black-on-white vessels.


Figure 7. Representative sample of types of painted vessels recovered from the Jewett Gap Site. Not to scale. 1, Tularosa White-on-red; 2, Starkweather Smudged Decorated; 3-5, Wingate Black-on-red; 6, Puerco Black-on-red; 7, St. Johns Black-on-red; 8, Springerville Polychrome; 9, Puerco Black-on-white; 10-16, Reserve Black-on-white; 15-23, Tularosa Black-on-white.

1 and 2, Interior and exterior of a Springerville Polychrome bowl. The interior black paint design is glazed.

3 and 4, Interior and exterior of a Springerville Polychrome bowl. The interior black paint design is outlined in white paint.

Figure 8. Two Springerville Polychrome bowls from the Jewett Gap Site (not to scale).

1. San Francisco Red.

2. Tularosa Black-on-white.

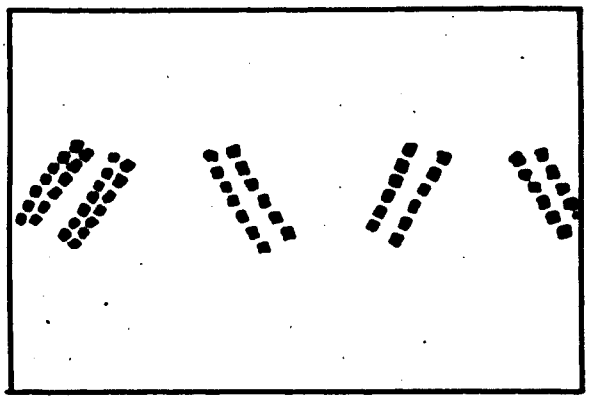
3. St. Johns Black-on-red.

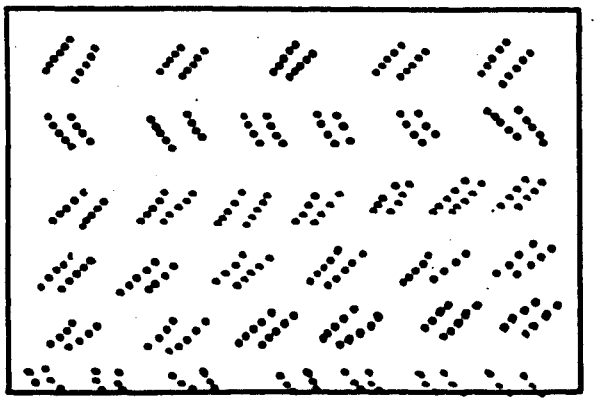
4. Tularosa Black-on-white.

5. Reserve Black-on-white.

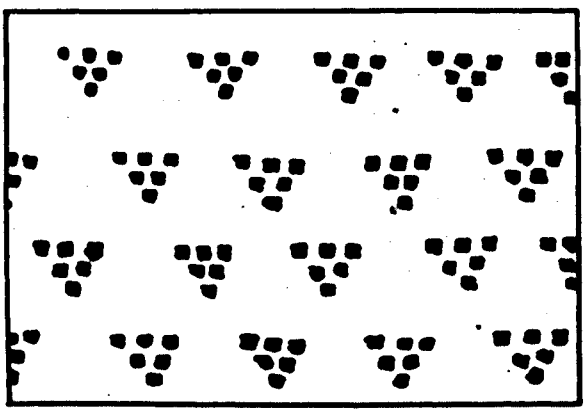
6. Puerco Black-on-white.

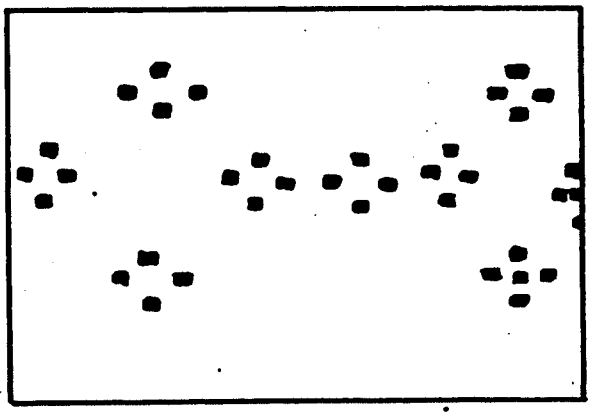
Figure 9. Similarities between vessels of different pottery types at the Jewett Gap Site. 1 and 2, vessel shape; 3 and 4, vessel shape and design; 5 and 6, design.





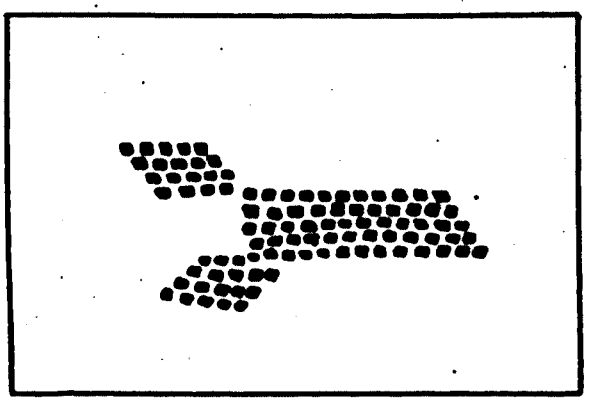
1, oblique parallel lines.

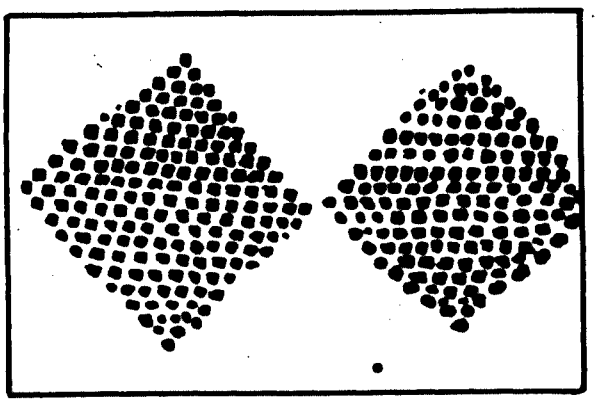




2, small triangular shaped areas.

3, small diamond shaped areas.





4, "birds".

5, large diamond shaped areas.

Figure 10. Design elements on Tularosa Patterned Corrugated vessels. Darkened areas indicate indentations.