The Kivas of Paako and Kuaua

Marjorie Tichy
tive feature. The butt end is merely cut off and left open to engage the atlatl spur.

The *central section* is formed of a slender cane (*Phragmites communis*) 45 cm. long and 9 mm. in diameter. It is telescoped into the butt section and held here by the sinew wrapping mentioned above. There is no decoration.

The *foreshaft or point* is made of greasewood (*Sarcobatus vermiculatus*) which has been scraped and polished until its uniform diameter is 7 mm. It telescopes into the end of the cane center section. It is 57 cm. long, of which 10.5 cm. are hidden inside the cane shaftment. This inserted end has a long fine cylindrical taper. Although the tip is somewhat shattered it is too slender to conceive of as having had a stone point attached. It is merely a simple wood foreshaft with a sharpened conical point. It is unornamented.

The occurrence of cane and greasewood arrow fragments in the upper levels of other parts of the shelter would argue for the validity of the atlatl-bow sequence first proposed for this region by Harrington ("Lovelock Cave," pp. 24-28). The occurrence is definitely post-Lahontan in time; Harrington's remarks ("Lovelock Cave," p. 120) would seem to apply here in searching for the time of first occupation.

Of much interest is the occurrence of pecked petroglyphs on the smooth tufa-surfaced cliff. Various forms are shown in Fig. 2, p. 68. It is of interest to note that these petroglyphs do not extend below the level of the present deposit surface. In other words, they are post-atlatl in time and may be presumably linked with the bow culture, perhaps identifiable (although not proven as yet) in its latest phase as that of the Northern Paiute. The petroglyphs are from 8 to 15 feet above the level of the guano layer in which the atlatl dart was found.

The associated occurrence in the guano layer of a string of about 50 *Olivella biplicata* shells with the spires ground off argues for a Californian, trans-Sierran, contact at this early date.

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THE KIVAS OF PAAKO AND KUAUA

Religion, which has always played a major part in the lives of the Pueblo Indians, still seems to provide an endless source for investigation in Southwestern anthropology. The kiva, which for centuries has been associated so closely with the ceremonial and religious practices of the Pueblos of the Southwest, is treated with especial care when uncovered. Until fairly recently little was known about Rio Grande kivas, since most of the previous investigations have been centered in the Jemez, Pajarito Plateau and Chama areas. The excavations of the Museum of New Mexico and the University of New Mexico at Paako
and Kuaua have broadened our knowledge of Rio Grande kivas considerably.

Kuaua is a Tiguex ruin within sight of the present village of Bernalillo, New Mexico, which is seventeen miles north of Albuquerque, on the main highway to Santa Fe. It is situated on a sandy promontory of the west bank of the Rio Grande. It figured in early Spanish history, having been visited by Coronado in 1540.1 Coronado may have wintered at this town during his stay in the Tiguex Province. To the east of the ruin rise the rugged Sandia Mountains.

On the eastern side of the Sandia Mountains, and west of the San Pedro Mountains, lies Paako, some twenty-five miles northeast of Albuquerque. Not much is known of this old Tanoan town, but it was also visited by the Spaniards, and soon adopted some Spanish artifacts and styles. A short lived mission, San Pedro del Cuchilla, is supposed to have been established here in 1661.2 However, no visible trace of a mission was found on the ruin. The site is believed to have been abandoned about 1670.

At Kuaua there are two classes of kivas: the first is the plaza type, and the second the ceremonial room, or room-kiva. There were five plaza kivas on the ruin,3 two of the circular type, while the others were square and proved a distinct departure from what had been anticipated. All of the kivas were of adobe construction.

The smaller of the two circular kivas was possibly a clan kiva. Its greatest diameter was only fifteen feet, five inches. It had a rectangular adobe altar-deflector with a small firebox in front. The altar firebox complex was situated in the east end of the kiva. Parallel to each other, but on opposite sides of the altar and firebox were two rows of loom holes. There were seven holes in each set. Perhaps the most important fact concerning this kiva was its fill. After abandonment it had been entirely filled with refuse containing abundance of cultural debris. There were no interments in it. The ceramic content revealed that it was one of the earliest kivas built on the site of Kuaua, and that it was abandoned while the town was quite young. From this kiva came the following:

1. Three restorable Agua Fria (glaze A) 4 bowls.
2. One dark grey non-restorable glaze A bowl.

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3. One plaza is yet incompletely excavated, and others may be found.

3. Two restorable black utility jars with banded necks.
4. One restorable, and remarkably designed, Abiquiu Black on Grey bowl.

Forty-seven per cent of the kiva's pottery was glaze, fifty-two per cent culinary, and one per cent was Abiquiu and Wiyo Black on Gray ware. Eighty-four per cent of the glaze bowl rims were Agua Fria Black on Red ware. Fifteen per cent of the bowl rims were glaze B, and one per cent was glaze C. The glaze decorated ollas were one hundred per cent glaze A.

The second circular kiva was much larger than the above, its greatest diameter being thirty feet, two inches. A stratigraphic test was made in this kiva from a block seven feet by sixteen feet, and to a depth of ten feet. While this study was made on the rim forms of bowls only, and excluded all other types of pottery but intrusive wares it revealed one or two important facts. There was no long continued deposition. It showed a greater percentage of glaze D than any other type, and steady appearance, though in smaller amounts, of glaze A was also significant. Glaze E was also rather well represented, especially in the upper two levels. There was a noticeable paucity of glaze B and C; as was the case in many other parts of the ruin.

Intrusive shards from this test were as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Bandelier Black on Grey</td>
<td>19</td>
</tr>
<tr>
<td>II</td>
<td>Bandelier Black on Grey</td>
<td>9</td>
</tr>
<tr>
<td>III</td>
<td>Bandelier Black on Gray</td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>Abiquiu Black on Gray</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bandelier Black on Grey</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Jeddito Black on Yellow</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chaco “2”</td>
<td>1</td>
</tr>
<tr>
<td>V</td>
<td>Jemez Black on Grey</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Galisteo Black on Grey</td>
<td>1</td>
</tr>
</tbody>
</table>

The study of the pottery from the remainder of this kiva substantiated the finds of the stratigraphic test.

This kiva and its fill were considered important because it is one of the very few places on the site where dumping could have been carried on, for so much of the ruin is eroded, and rests on a natural level of adobe. In ground plan it was identical with the smaller one. It was in a poor state of preservation, and the northeast wall had given away because of heavy refuse pressing in from that side.

The square plaza kivas of Kuaua, and particularly one of them, proved to be the most interesting yet encountered in the Rio Grande. The largest of these is a great subterranean double walled building in

5. Gordon Vivian, Summer, 1935.
the north plaza. It shows clearly how a somewhat smaller kiva had been built inside of a former one. Its longest wall measured thirty-one feet, and one inch.

It had a curious form of entrance in the south wall which had been sealed over after a time. Instead of the usual roof entrance encountered in kivas, this one had been made through the south wall from the outside. There had been another such opening in the east wall in the first and original kiva, and the ventilator shaft of the inside kiva had been constructed from this opening. Evidence pointed to two possibilities; the first one being that the only entrance was through the roof at the time the kiva was last in use, or that upon abandonment the passage in the south wall was sealed purposely to protect the kiva.

It would be difficult to say just how long it took for this kiva to fill after abandonment occurred. Unfortunately there was no stratigraphy, and the soil contained herein was wind blown sand. There had never been any conscious dumping carried on, but many interments were laid in its vicinity. The pottery taken from here was surprisingly scanty. Forty-three per cent of it was utility ware, while fifty-six per cent was glaze-decorated ware.

Thirty-two pieces of intrusive pottery were removed from here, and are as follows:

1. Abiquiu Black on Gray  
2. Bandelier Black on Grey  
3. Jemez Black on Grey  
4. Potsuwi'i Incised  
5. Tsankawi Black on Cream  
6. Wiyo Black on Grey  
7. Sikyatki  
8. Tewa Polychrome  
9. Pecos Glaze II and V

In the study of the glazed decorated bowl rims the following occurred:

| Glaze A—4% | Glaze B—3% | Glaze C—8% | Glaze D—28% | Glaze E—36% | Glaze F—21% |

Glaze E will be seen to be the dominant type, although types D and F are also quite strong. A significant fact to consider is that most of this shard material came from a level of three feet of ashy sandy soil resting on the kiva floor. Above this only two bags of shards were removed. It is probable that a good number of these shards could have slipped in when burials were placed near, and on the walls of the kiva.

This kiva had an adobe floor. It had a large shallow firebox in the east end, and directly behind this had been a rectangular adobe altar-deflector, whose original height, unfortunately, could not be determined because of extreme weathering.

The roofing of the building is highly problematical since only one wood specimen was encountered from here, and this was a rotted upright cottonwood beam in the southwest corner. It would seem, how-
ever, that the roof had been held up by at least four\textsuperscript{th} large posts, whose holes were found intact. Whether these would suffice to hold a roof over a building this large is another question.

In the south plaza are two other square kivas. Situated near the junction of the West House and a wing of dwellings dividing the plazas into North and South Units is a kiva whose sides average a bit over seventeen feet. This kiva is one of the most valuable finds of recent excavations. When its excavation was first begun brilliantly colored paintings upon the plastered walls were noticed. They revealed much of the artistic talents and religious beliefs of the Kuauans, and have been preserved for future study. There were three rows of loom holes, and the floor features were similar to those of the circular kivas. Entrance was undoubtedly through the roof. Sixty per cent of the pottery was culinary, thirty-nine per cent was glaze, and one per cent was Bandelier Black on Grey. In the olla and bowl rim types glaze F was decidedly predominant. The “Soup plate” appeared, and a square miniature prayer meal bowl shard. In the altar seven shards were removed, five of which were glaze F, and two were glaze E. No tree ring specimens were found. This kiva was undoubtedly in use when the Spaniards arrived.

A little to the northeast of this one is another square subterranean kiva whose longest wall is twenty-two feet, nine inches. It contained well defined strata which were removed in five natural levels. This kiva revealed the following: Glaze A, or Agua Fria, was the most common type in nearly every level. Glaze B followed closely on its heels. Glaze C and the above two types are the only glazes represented in the lower levels. Glaze D is poorly represented and declines almost to disappearance in the top layer. E is twenty-eight per cent of the total pottery in level three; it takes a decided slump in level four, and rises to fifteen per cent again in the top level. Glaze F was found in the top level only, and there were but two shards of this type. The earlier three glaze rim types are heavily represented in all the levels. This kiva appears to represent a case of refuse being deposited during the earlier occupation. So scanty are D, E, and F that it seems this kiva was used very little as a dump by later people. The reason for abandonment was burning, for the entire outline of the rotted and burned roof was still to be seen resting on the floor. Hence we know this kiva was one of the earliest on the ruin. Its floor features including the altar-deflector, were situated like those in the mural kiva.\textsuperscript{7}


\textsuperscript{7} In Winship, G. P., \textit{The Journey of Coronado}, as told by Castaneda, A. S. Barnes & Co., 1904, p. 98, line 19, the statement is made that Tiguex kivas had floors of flat, smooth stones. We found none here, or at Puarray of Bandelier (also a Tiguex ruin) which was excavated in conjunction with Kuaua.
In the South House of the Kuaua quadrangle were two large rooms whose floor features in every essential could be called kiva. However, the term “ceremonial room” would probably be more applicable. These were formed in both cases by removing walls between two normal-sized rooms. Both were well surrounded by rooms, and at the time of occupancy no doubt had rooms above them. There were entrances into these from surrounding rooms. Both contained rectangular altar-deflectors. One had the altar-deflector and firebox to the east, and the other, situated at the junction of the South and East Houses, had its to the south. Both had excellent adobe floors containing two and four sets of loom-holes respectively. The two contained, primarily, glaze D pottery. Each averaged about seventeen feet on its longest side. In all appearances they were identical with the square subterranean plaza kivas.

In the North House was situated the third of these ceremonial rooms. It had the altar-deflector to the south, had an ante-chamber behind it, and two complete sets of loom-holes. Little pottery was recovered from here, but it was almost entirely glaze E. The only other type represented was glaze D.

In what might be termed the central Plaza Unit of Paako are situated three circular, stone, subterranean plaza kivas. The plaza is surrounded by stone masonry rooms, many of which were two storied. The two smaller kivas of this trio are situated in the Southwest and Northwest corners of the plaza. In about the middle east end of the plaza is the largest kiva. It is the most crudely constructed unit in any excavated part of the ruin. It is made up of a conglomeration of all sizes of stone, and more than a generous supply of mud. It is hardly more than a great opening dug in rocky soil. The stones were set at random, padded with adobe mud. Numerous discarded metates, manos, and other stones were used, and the finished kiva resembles a great “slab” house. The structure was probably only partly subterranean for more than half of it had been above the ground. There were no features but a ventilator-like opening on the northeast side. Its unusual size and its shape were the only features suggestive of a kiva. It was crammed with thousands of shards, and in all probability represents a clear case of re-dumping from surrounding territory. Shards of various black on grey wares from the Santa Fe, Galisteo, Chama, Pajarito, Socorro, Tularosa, and Chaco districts appeared in profusion, associated with early and late glazes, but no intermediate glaze types appeared.

One of the smaller kivas of this plaza, named the northwest one, was excavated. It was built of roughly laid stone of various sizes and with adobe mortar, and was in very good state. It was twenty feet, ten inches in diameter, and ranged in depth from five feet, four
inches, to six feet, seven inches. Fragments of plastering still clung to the walls at several points near the floor. The kiva had an excellent rectangular stone altar more than two feet high and three feet, five inches wide. The *sipapu* occurred a little to the south side of the altar. Built directly at the base of the altar was the firebox which measured one foot, five inches by two feet, seven inches and was six and a half inches deep. In back of the altar was a stone covered trench in the floor leading into the ventilator. This trench was two feet, six inches long. The ventilator shaft was two feet, one inch wide, and was two feet, six inches high. All of the floor features were on the east side of the structure. The floor was adobe, and bore no units other than those named above. Two metates, sixteen broken manos, one whole mano, a polishing stone and one-third of an awl were removed from here. The kiva was almost barren, for nothing occurred at all two feet above the floor. Most of the pottery was found in the altar and ventilator shaft region. A restorable glaze F mug came from the ventilator shaft. Most of the glaze bowl rims were glaze F. The only other class of pottery to be represented here was Abiquiu Black on Grey. Nothing of the roofing could be determined, and entrance must have been through the top. This kiva was probably one of the last ever used on the site.

The northeastern-most end of Paako was made up of a mound containing a large adobe communal house consisting of more than one hundred and fifty ground floor rooms. The entire extent of this house can not rightly be determined now, for at the time excavation ceased, adobe rooms were still occurring to the extreme west end of the mound. In some cases new dwellings had been formed by building up abandoned adobe rooms with stone and mud. So far, no plaza can be definitely connected with this house. Surface examination suggested that the dwelling might possibly have extended some distance to the west, and in that event there may be a plaza now partially covered and built upon. No kivas were encountered outside of the communal house, but built among the rooms of the structure were four large, square kivas. The two innermost of these were no doubt covered over by rooms above, and the other two probably not. These kivas were older than any of the square kivas of Kuaua. The first kiva was encountered soon after the mound was opened, and was discovered when it was noticed that four average adobe living rooms subdivided an older and larger structure below.

The kiva had been abandoned, dumped into for a time, and the rooms were later made above it. It was entered from adjoining rooms, and possibly from above also. While constructed in similar manner to those of Kuaua, its walls, as well as those of the other three were somewhat better. This was probably because of slightly better quality of adobe, and because of a more protected situation.
The kiva was somewhat subterranean. It contained a hard and slightly blackened floor. The altar, although almost entirely gone, could be seen in outline at the east end of the kiva. The shallow fire-and-ash-boxes were situated just in front of it. The shape of the base of the altar was a long, slim rectangle. The ventilator shaft of the kiva was built between it and the next room. The kiva walls had been plastered frequently, and although badly disintegrated and weathered, geometrical fragments of paintings in yellow and black, black and white, white and yellow, and black, red and white, could be detected on three of the walls.

This fact alone is significant in that it means square, adobe, painted kivas existed earlier, and much farther to the northeast than heretofore was known. This kiva’s longest wall was nineteen feet.

Several rows farther to the west of this kiva the second one was encountered. In the day of usage it too was probably slightly subterranean. Many rooms had been dug into to make a place for it. The kiva had been sunk into well stratified refuse. The longest wall was fifteen feet, eight inches.

The fire-box, altar-deflector, and ventilator shaft were at the south end of the structure. The altar, an adobe rectangle, was eight inches wide, two feet, one and one-half inches high, and two feet, six inches long. The firebox, which was one foot, four inches north of the altar, was one foot, ten inches wide, one foot, six inches deep, and two feet, three and three-fourths inches long. The ventilator shaft, constructed of adobe mud, was two feet, seven inches from the west side of the altar, was one foot, four inches wide, and two feet, four and a half inches high. The rest of the adobe floor was featureless. Black and white plastering still clung to the walls in places. It averaged five feet in height. There was a two foot layer of wind blown material at the top, but the kiva and the rooms surrounding it were filled with stratified layers of cultural material. The bulk of the pottery from here consisted of Agua Fria glaze A, Abiquiu Black on Grey, Wiyo, Santa Fe, and Galisteo Black on Grey with related culinary wares. Two glaze A bowls came with infant burials at floor level. In the rest of the fill there occurred many bone tools, prayer-plume holders, metates, and manos. The two burials show that this kiva was abandoned when Agua Fria was the only glazed decorated ware in usage. The rooms built over the painted kiva also contained like shard material, as did the dump of the kiva itself.

At the east end of the communal house with several rooms just beyond it, occurred the third of these square adobe kivas. The greatest wall length was eighteen feet, one inch. Since it lay on the slope of the mound the walls were quite eroded, the highest wall being only three feet, nine inches. This kiva had never been subterranean, for
its floor was even with those of surrounding above-ground rooms. All four walls showed evidence of plastering. The floor features were situated in the east end of the kiva. The adobe altar-deflector was the only one of its kind uncovered here, or at Kuaua. It was U shaped, with two arms extending west. The arms were two feet long and stood ten inches high. The altar was two feet, seven and three-fourths inches from the ash box. It was two and half feet wide and one foot, five inches high. The floor was blackened adobe. The walls, although shallow, were well preserved. A smooth well-made niche was built in the northwest corner, large enough to contain a medium sized jar. One mano came from the kiva with shard material of Agua Fria Black on Red glaze, Santa Fe, Wiyo, and Galisteo black on grey, and related culinary wares.

The last of these square kivas occurred on the south side of the communal house near the out-skirts, and had been made from three former rooms. The longest wall was twenty feet, six inches. The floor features were in the south end of the structure, and consisted of the following: a rectangular altar, a firebox, and an ash box. There was a kiva stone just west of the firebox. The ventilator shaft was situated in the south wall. There was a door way in the east wall leading to an adjoining room.

In this kiva were the remnants of four rotted posts, which, although not datable, gave some hint of how the roof was held in place. It would appear to have been held in position by posts set against the walls at intervals. Six holes remained in the floor, but there must have been more at one time. The floor was gone in about one-third of the structure, therefore accurate information concerning this point is impossible.

This kiva had borne the brunt of heavy dumping from rooms to the north of it after its abandonment, and hence we know it is quite old. The pottery was a mixture of Agua Fria glaze A, with related culinary and black on grey wares. Animal bones were abundant, and scattered through the fill were human bones. One mano was removed from the floor, and, with the exception of part of a broken ceremonial pipe in the ash box, no other artifacts were recovered.

In conclusion, several significant facts should be noted. The Paako excavation revealed that the square adobe kivas built in the communal house were much older than the stone, circular plaza ones. The idea of decorating the walls of these kivas in colors had come into being at Paako at an earlier date than at Kuaua. In one instance only at Paako had rooms been remodeled to form a kiva.

Ceremonial rooms, and square and round plaza kivas were co-existent at Kuaua, and in several cases were in usage at the same time.
Square kivas probably evolved from natural room construction and are to be observed in such a state at Paako. They seem much more easy to explain than circular kivas built among rooms, as at Mesa Verde and in the Chaco, where a great deal of difficulty in such building would be encountered. Future investigation will undoubtedly reveal a great deal concerning kiva development. The square kiva may be a local and independent development in the Rio Grande, although the same type has also been found in the Little Colorado. Just how ancient it is, remains to be seen.

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SUMMARY OF PAPERS READ AT THE APRIL MEETING OF THE A.A.A.S., SOUTHWESTERN DIVISION

The eighteenth annual meeting of the Southwestern division of the American Association for the Advancement of Science was held April 25-28 on the University of New Mexico campus. Three days of papers and discussion were followed by an all-day field trip to Jemez and Cochiti. The following are short summaries of the papers read in anthropology during the meeting. They are arranged in order of presentation.

The Lithic Industries of Southeastern Wyoming: E. B. Renaud, University of Denver.

Seventy sites, on which implements of chert and quartzite, with Clactonian technique of chipping are found, have been located in Wyoming. The implements found are percussion flaked and resemble most closely African artifacts. Most of the chipped stones are scrapers, choppers, cleavers, and a few axes. Some of them show rechipping and some are polished by wind and sand. The later type of artifact is somewhat smaller, and there are few sharp pointed stones. Few blades were found.

The paper was illustrated with slides showing the types of artifacts found, and some of the blades were displayed during the conference.

8. Numerous shards of Saint John's Polychrome, Pinedale Polychrome, Hesho-tauthla, and other Little Colorado types appeared in the refuse of the communal house of Paako, so the two regions had some contact with each other.