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AN ARCHEOLOGICAL COLLECTION FROM YOUNG'S CANYON, NEAR FLAGSTAFF, ARIZONA

(WITH NINE PLATES)

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Notwithstanding the important articles on Southwestern antiquities that have been published during the past decade, we are still on the threshold of the subject. Many generalizations thus far suggested are provisional and must so remain until more comprehensive knowledge is available to provide broader foundations. We are greatly in need of field-work in several little-known localities, and one or two specimens are not sufficient to warrant conclusions that have been drawn from such limited comparisons. One of the least known of these uninvestigated areas of our Southwest, but one that bids fair to yield instructive results bearing on the solution of important problems, lies in Arizona, extending down the eastern slope of the San Francisco mountains and ending in the foothills on the left bank of the Little Colorado. These mountains are called by the Hopi Indians Nuvatikiobi, or The Place of the High Snows. Lying in full sight of the Hopi mesas, they are associated with many Indian migration legends and important Hopi ceremonials. A few miles from the left bank of the river, at Black Falls, there are clusters of high stone buildings with massive walls that are among the best preserved prehistoric monuments of our Southwest, and although well known to local students, they have been overlooked by some of the latest writers on the archeology of the Southwest. Fortunately, however, these little-known buildings have been officially recognized, and are beginning to attract the attention of students. The most striking of the ruins have lately been grouped by a proclamation of the President into a National Monument under the name of Wupatki, a word applied to them long ago by the Hopi Indians.

The history of these ruins is rather brief. They were first mentioned in 1853 by Sitgreaves, but for many years after no printed reference was made to them; in 1900 the author figured and described these buildings in an article in the American Anthropolo-

gist, which was later quoted in a more comprehensive work on "Two Summers' Work in Pueblo Ruins." Still later (1904), in "Records of the Past," a plea was made for their preservation as a National Monument. These studies were especially limited to architectural features, and little was said in them about minor antiquities. Through a fortunate circumstance the author is now able to add a few facts to our knowledge of the artifacts of this region.

During the past year, in constructing a road near Flagstaff, Arizona, it was necessary to remove an artificial mound, the contents of which revealed a prehistoric cemetery. A number of mortuary

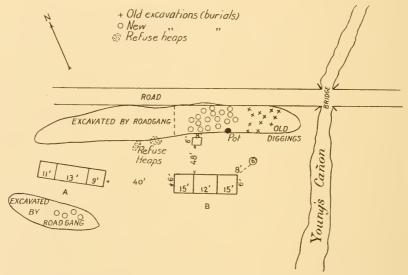


Fig. 1.—Diagram of excavations in cemetery at Young's Canyon.

objects, mainly pottery, were exposed by the workmen, and although in the beginning some of these objects were lost, it so happened that Mr. J. C. Clarke, of Flagstaff, heard of the discovery in time to rescue many specimens. These he transmitted to the Bureau of American Ethnology, and they were later transferred to the U. S. National Museum. Although the collection is small, it was a very welcome accession, not only because there were in the Museum but few specimens from this locality, but also because some of the ob-

¹ Amer. Anthrop., Vol. II, No. 3, pp. 422-450, 1900.

² 22d Ann. Rept., Bur. Amer. Ethn., p. 3, 1903.

³ A cluster of Arizona ruins which should be preserved. Records of the Past, Vol. III, pt. 1, pp. 3-19, 1904.

jects are unique. The author regarded this addition as so important that he has prepared the following account as a contribution to a little-known subject.

Only three collections from this region are known, one now said to be in California (Southwest Museum), made by Mr. Benjamin Doney¹ before 1900, and another made by the author about the same time, which is in the U. S. National Museum. Neither of these collections has been published, although they contain highly instructive objects. There is a small unpublished collection at Flagstaff. When Mr. Clarke submitted the present collection he sent the writer a catalogue, which is here published with a few unimportant changes. The general forms of the pottery are shown in the accompanying plates (pls. 1, 2, 3).

CATALOGUE² OF THE OBJECTS FROM A MOUND AT YOUNG'S CANYON, NEAR FLAGSTAFF, ARIZONA

GRAVE NO. I

- 1. Dark red ware food bowl.
- 2. Dark red ware food bowl.
- 3. Dark red ware food olla.
- 4. Dark red ware pot, with flat bottom, cracked.
- 5. Bottom of a corrugated vessel.
- 6. Dark red ware ladle.

GRAVE NO. 2

No object was found in this grave, but there was evidence that a badger had worked through it.

GRAVE NO. 3

- 7. Gray (white) ware food bowl, painted inside (broken and repaired).
- 8. Dark red ware bowl.
- 9. Dark red ware bowl.
- 10. Dark red ware olla.
- 11. Dark red ware olla. There is a blister on one side of the bottom, probably formed in burning.

¹Mr. Benjamin Doney made extensive excavations in several of the ruins near Flagstaff, and acquired a considerable collection which the author examined in 1900. This collection, according to the author's information, was sold in California and has not been published. When the author examined it, he was much interested in several valuable specimens.

² Prepared by Mr. J. C. Clarke, of Flagstaff, Arizona.

GRAVE NO. 4

- 12. Dark red ware bowl (broken, part gone).
- 13. Dark red ware bowl (broken and repaired).
- 14. Dark red ware olla.

GRAVE NO. 5

- 15. Gray ware food bowl with handle; painted inside, cracked.
- 16. Gray ware bowl, painted inside.
- 17. Bowl of a ladle, painted inside (handle broken off and lost).
- 18. Dark ware pot.
- 19. Small dark ware olla.
- 20. Small dark ware olla.

GRAVE NO. 6

- 21. Dark ware jar, with slightly flaring rim.
- 22. Dark ware bowl.
- 23. Gray ware bowl, painted inside (handle broken off).
- 24. Gray ware bowl, handled, painted on inside (broken and repaired).
- 25. Rough ware jar, handled.1

GRAVE NO. 7

Contained nothing.

GRAVE NO. 8

Contained nothing.

GRAVE NO. 9^2

- 26. Ladle.
- 27. Ladle (grooved handle).
- 28. Dark ware bowl (broken and repaired).

 1 This pot contained a double handful of vegetable matter resembling decayed food. The pot was covered with a piece of broken pottery on which lay one-half of a bivalve shell measuring $5\frac{1}{4}$ inches long by $4\frac{1}{2}$ inches wide.

² This must have been the grave of a person of some importance, as around the neck of the skeleton was a "dog collar" necklace (pl. 9) consisting of 565 mussel shells. There seemed to have been a shell necklace to which were attached short strings of shells.

At the waist line on the right side were 19 small arrow points of smoky topaz, 21 perforated olivella shell beads (one of which did not have the end

- 29. Dark ware bowl (cracked).
- 30. Dark ware bowl.
- 31. Dark ware bowl.
- 32. Dark ware bowl.
- 33. Dark ware bowl.

GRAVE NO. 10

- 34. Small corrugated pot (handle gone).
- 35. Bowl of dark ware ladle, without handle.
- 36. Rectangular dark ware dish (fig. 2).1
- 37. Gray ware bowl, painted inside.



Fig. 2.—Square food bowl of red ware with polished black interior. (Size: 3_8^{17} long x 2_8^{77} wide x 1_8^{87} high.)

- 38. Small dark ware ladle, handle broken.
- 39. Small dark ware bowl.

ground off so that it could have been strung), two beads, and a small piece of polished but undrilled turquois.

About half way between the hip and the knee on one side was another cache that contained 14 obsidian chips, a conical shell, $1\frac{3}{4}$ " long (has the long end ground off), and a cone-shaped piece of red sandstone $1\frac{1}{2}$ " long.

On the left side of the body about the waist line there were two large bone awls, one of which is nearly 9" long, and the other about $7\frac{3}{4}$ " in length.

There was a clay ladle on each side of the head, these being numbered 26 and 27. A picture of No. 26 taken from two positions is shown (pl. 6).

¹This bowl (fig. 2) is rectangular in shape, containing a fragment of white "paint." Lying by the side of this paint was the end of a painted wooden object, probably a prayer stick. The wood is badly decayed, but the paint has so preserved the surface that its shape may be seen and the object identified. It measures slightly over an inch in length and is about ³/₄ of an inch wide.

GRAVE NO. II 1

- 40. Small dark ware olla.
- 41. Large dark ware olla (badly cracked).
- 42. Large gray ware bowl, painted inside (badly broken, part absent).
- ·43. Gray ware bowl, painted inside; a lump of white "paint" adhered to the bottom.
- 44. Gray ware bowl, painted inside.
- 45. Dark ware bowl, chipped.
- 46. Dark ware bowl.
- 47. Small corrugated pot.
- 48. Small dark ware olla.
- 49. Small dark ware bowl.

GRAVE NO. 12

- 50. Corrugated olla.
- 51. Gray ware bowl, painted inside.
- 52. Small dark ware bowl.
- 53. Small dark ware bowl.
- 54. Small dark ware bowl.

GRAVE NO. 13

Contained nothing.

GRAVE NO. 14

55. Dark ware ladle, short handle (broken and repaired).

¹ This was the grave of a child. On the lower left arm bones of the skeleton were eleven shell bracelets.

There was a flat bone object (pl. 8, a, b) lying lengthwise from the forehead of the skull towards the back of the head, just as if it had been worn in the hair, but the dirt settling on it had broken it in three pieces. Upon cleaning and matching the pieces together I found that the surface had been etched or engraved the entire length. It measures ten inches in length and is about $\frac{3}{4}$ of an inch wide at the butt end. In the soil several inches above the skeleton there was found the broken butt end of a wide awl-like object, the surface of which had been etched. This piece is only about four inches long and one inch wide. The position of the objects, as well as their form and incised decoration, tend to the conclusion that they were ornaments to which feathers were attached and worn in the hair.

An attempt to interpret these objects by the study of modern survivals will be found in the following pages.

GRAVE NO. 15

- 56. Dark ware bowl.
- 57. Dark ware bowl (cracked).
- 58. Dark ware ladle.
- 59. Dark ware bowl.
- 60. Dark ware bowl, chipped (broken and repaired).
- 61. Dark ware bowl, chipped.

GRAVE NO. 161

- 62. Reddish ware bowl, handle broken.
- 63. Bowl of a dark ware ladle, handle gone.
- 64. Gray ware bowl, painted inside (broken and repaired).
- 65. Corrugated bowl (badly broken and repaired).
- 66. Dark ware bowl, cracked.
- 67. Dark ware bowl.
- 68. Corrugated pot.

GRAVE NO. 17

- 69. Dark ware olla.
- 70. Dark ware olla, chipped.
- 71. Dark ware bowl.
- 72. Dark ware bowl.

(Nos. 71 and 72 were nested.)

- 73. Dark ware olla.
- 74. Dark ware olla, chipped.

(Nos. 73 and 74 were nested.)

FROM SEPARATE LOCATION

75. Small dark ware pot.2

¹ This grave contained the skeleton of a woman. The body had been buried face down and on her back and shoulders was the badly decayed skeleton of a child, indicating that mothers carried their small children on their backs as the Hopi do today. There was a small corrugated pot (No. 68) between the knees, and on the outside of the right leg was a "lignite button" measuring 2½ inches in diameter. This button had two parallel grooves, leaving a ridge between the grooves through which a small hole had been drilled from each side of the ridge until the holes met, thus affording a chance to suspend it.

² This small pot had been used as a burial urn, as it contains some of the burned bones of a child; a molar tooth and sections of the skull can be easily recognized.

Mr. Clarke adds the following notes:

"The discovery of this pot was the main incentive that the work should be watched, for I have in my possession two other pots that have been used for this

COMMENTS ON THE COLLECTION

POTTERY

The collection catalogued above is the first from the Flagstaff region yet published, and contains more significant objects from that area than occur in any other eastern museum. It is particularly important, as it may be used in comparisons with other collections from better known regions of the Southwest, and thus shed some light on the relation of the culture of the aborigines of the Little Colorado and other pueblo areas.

The following among other types of pottery were recognized:

- I. Corrugated ware (pl. I, g; pl. 2, d; pl. I, f—neck coiled).
- 2. Rough undecorated ware.
- 3. Red ware with glassy black interior (pl. 2, a, b, c).
- 4. Undecorated red ware (pl. 1, *h*, *i*; pl. 3, *b*, *c*, *d*).
- 5. Black and white ware bowls, painted on the inside with black geometrical decorations (pls. 4, 5).

The majority of the pottery objects are food bowls, but there are also vases, ladles, and other forms (see pls. 1-3 and catalogue).

The designs on the ware are among the most important for comparisons, and as little attention is given to this feature in the catalogue, the author has introduced the characteristic representations on the accompanying plates (pls. 4, 5). In the author's judgement, figures on this black and gray ware are among the most striking, from an artistic point of view, of any in our Southwest. None of the bowls bears naturalistic designs or those representing men or animals.¹

same purpose. This pot and contents (75) came from the same place where I caught a fellow digging a couple of years ago, who a few days later sold me the two pots I have and while he would not admit getting anything, I am confident that I am right in my supposition. I am very sorry not to have found one of the larger ones, as I am sure that you would have been interested in the discovery as I have been unable to find anywhere a record of cremation having been practiced in the Little Colorado Valley.

"The following pieces have not been listed:

- 6 fragments of bone awls;
- I fragment of lava that had been hollowed out to use as a mortar;
- 5 hand stones that are in good shape; several broken hand stones; several pieces of broken shell bracelets;
- 5 whole shell bracelets;
- I piece of cherry colored stone, polished, about the size of a large plum; potsherds of different colors."

¹ This is also true of the majority of decorations on black and white ware from the San Juan Valley.

The pottery specimens, although mortuary, bear no indication that they were purposely perforated or "killed," a custom so common in the Mimbres and in certain other areas of the Southwest, and there are no specimens showing the broken encircling lines, a feature likewise unknown in pottery from the Mesa Verde and the San Juan Valley. This failure is instructive, as the presence of the broken line is so common higher up on the Little Colorado, at Homolobi (Winslow), and Hopi ruins, Sikyatki, Awatobi, and along the Antelope Valley. There are no effigy jars or attempts at relief decoration. No designs were noted on the exteriors of the bowls, a feature so common at Sikyatki, Homolobi, and other ruins in the middle valley of the Little Colorado. Although the interiors of the decorated bowls are in the main white in color with black designs, the author has collected from near the great buildings in Wupatki examples of what may be called a polychrome ware, mostly dull red bowls, on the inside of which occur designs similar to these here depicted. These designs correspond in color to bowls from the Marsh Pass Region.2 We find only occasionally that they are enclosed in a framework of encircling lines, but cover the whole interior of the bowl with the exception of a central area which may be circular or rectangular, but destitute of figures. The majority of the designs are formed of four units which may be the same or unlike, sometimes arranged in pairs. In certain examples we find figures in white on a black ground. Although the designs are all geometric, rectilinear and curved component lines are about equal in number.

It will be noted that in several of the figures the black color in the design is greater than the white, or in other words the decoration may be said to be in white on a black background, which is so striking in plate 5, b. This tendency of "negative" figures on black ground appears also in designs from the Mimbres Valley, Tokonabi (Kayenta) ware and is also shown in the beautiful vase, the finest known to the author from the Chevlon ruin. The designation "heavy

¹ It is highly probable that this custom was introduced from the south (Lower Gila), but it occurs on ancient ware from Jemez. A modified form occurs on Chaco Canyon ware and elsewhere. It can hardly be possible that such a specialized feature as this could have developed independently, and its absence in the oldest ware is significant.

² Kidder, pl. 32, "Introduction to the Study of Southwestern Archeology," figures six designs typical of his Kayenta ware, which are almost identical with those shown in plates 4 and 5 of this article.

³ Ibid., pl. 31.

⁴ 22d Ann. Rept., Bur. Amer. Ethn., pl. XX.

black " (Kidder) design on white ware might give place to mosaic white decorations on black background, or simply white figures on black, where the design is in white, the black base serving to show its form.

The use of black bands, either straight or curved, with rows of dots as an ornamental motif is an instructive feature in the pottery, although duplicated in other ceramic areas. Commonly these rows of dots are symbols of corn, but here the design is probably an ornamental rather than a symbolic one. Attention may be called to the effective arrangement of the bands with spots into four units with double rows of rectangular nucleated spots shown in plate 5, a. The white spots on a black ground reappear in plate 5, d. In plate 5, c, there is a dual arrangement, a departure from the uniformity of the four units in the quadrate design, and in plate 4, d, one is different from the other three.

LADLE WITH HANDLE MADE INTO A CRADLE WITH INCLOSED FIGURINE

The most exceptional piece of pottery from the Young's Canyon cemetery is a black and white ware ladle, the sides and end of the handle of which are pinched up and modified into a cradle containing a small clay figurine,² shown from above and the side in plate 6.

Another example of a ladle with a cradle on the handle was formerly owned by Mr. Frank Wattron, of Holbrook, Arizona, who purchased it from a Mexican pot hunter. The ruin in which this object was found is unknown. The specimen was sold, with the Wattron collection, to an agent of the Field Columbian Museum of Chicago. While it was still in possession of Mr. Wattron, in 1897, the author made two drawings of it, which are here reproduced (pl. 7).

Clay figurines of like shape, separated from cradles, have been found by the author in localities higher up on the Little Colorado, showing that although these ladles are rare, they were not unknown in prehistoric households of this portion of Arizona. The little images on their handles can hardly be called fetishes, but were more in the nature of dolls. Attention may be invited to a well-known habit of modern Indian mothers: Several Hopi ladles are known in which the handle

¹ This form of decoration occurs in the Chaco Canyon, Casa Grande, and other ruins.

² It was formerly not unusual to find, in collections of Hopi pottery, ladles, the handles of which were moulded into rude effigies representing the clowns who accompany the Katcina, or even Katcinas themselves. These have apparently gone out of use, and belong to the Hopi ceramic epoch, antedating the author's excavations at Sikyatki (1805).

is hollow, with small stones in the cavity, converting the handle into a rattle, suggesting a baby's rattle.¹ At times these were probably shaken to divert the attention of the infant, but the noise produced by such a rattle could hardly have been loud enough for use by dancers, who also often use rattles, frequently described by students of the ceremonial dances of the Pueblo Indians. Years ago the author collected a ladle of prehistoric date, on the handle of which a human figure was painted. The intention of this was practically the same as that of the clay image in an imitation cradle above described. There seems no doubt that these objects were used simply as toys to amuse children, and when the images are found separated from the ladles they have no sacred intent or character.

Of the specimens of ladles with handles modified into cradles, that shown on plate 7 is apparently better made and more highly ornamented than the specimen (pl. 6) from Young's Canyon. The bowl of the former has its interior decorated by a band with checkerboard pattern and there are two symbolic figures of rain clouds that do not appear in the ladle from Young's Canyon. It also shows a "broken line" called the "life gateway," so common in pottery taken from the Gila Valley and ruins on the Middle Little Colorado, as well as at Sikyatki and other ancient Hopi ruins. As this specimen is classed as black and gray (white) ware it is supposed to belong to the older types chronologically, but attention should be called to the fact that this break in its surrounding lines is wanting in the black and white ware of the San Juan ruins, and the evidence seems to be that the broken line shows the influence of another prehistoric epoch.

One of the characteristics of the author's sketch of the figurine in the Chicago specimen are the black marks that are drawn across the face on either side, from the corner of the eyes and mouth to the region of the ears. This is a common facial decoration of certain personators in the sacred dances of the Hopi known as "clowns" or Tatcukti, who are said to have come to Walpi from the south. In a dance that occurs in November, at the East Mesa, they carry phallic symbols and are called Tataukyamu.

Clay effigies identical with those in the handles of these ladles, but free from them, were collected by Kidder and Guernsey on the surface near Ruin A, in the Marsh Pass region, Arizona. Their use

¹22d Ann. Rept., Bur. Amer. Ethn.

² There are three different kinds of "clowns" at the East Mesa, called *Tatcukti. Koyimce*, and *Paiakyamu*. The last mentioned are Tanoan; the second, Zuñi.

was not determined and it was stated by these authors that "Nothing resembling these figures has ever been found, so far as we know, in the San Juan drainage, and nothing exactly like them anywhere in the Southwest."

STONE BURIAL CYSTS AT WUPATKI

Shortly after publishing his account of the Black Falls ruins, the author made a few excavations near the large buildings and found several good examples of the stone burial cysts similar to those described in the Marsh Pass (Tokonabi) region by Kidder and Guernsey. The sides of these cysts were made of stone slabs set on edge, and each enclosure had a stone slab for a cover. The pottery found in these graves had the same character, and bore designs like those here described from Young's Canyon. The identity of this mode of burial and its association with a massive walled building reminds one of the Ruin A in the Marsh Pass area. The form of the great building, Ruin A, and those of the Black Falls, is apparently the same, but the use is not as yet satisfactorily determined.

BURIAL URNS AND CREMATION

Mr. Clarke calls attention to calcined human bones in mortuary vessels which appear to have been burial urns blike those found at Casa Grande, elsewhere mentioned by the author. Cremation was a method of disposal of the dead, and is also reported by Mr. F. W. Hodge from Hawiku in the Zuñi Reservation.

BONE ORNAMENTS FOR THE HEAD

The collection contains a few bone objects, such as needles, bodkins, and the like, which do not differ greatly from those found in

¹ Bull. 65, Bur. Amer. Ethn., p. 144.

² These cysts were of circular or oval form containing human bones, skull, and mortuary offerings.

Similar burials were discovered many years ago by Baron Nordenskiöld in Step House on the Mesa Verde. (Cliff Dwellers of the Mesa Verde, 1893.) The existence in Step House cave of prepuebloan as well as puebloan culture was pointed out by the author in Smithsonian Misc. Coll., Vol. 72, No. 15, 1922.

³ *Vide* note on contents of Grave No. 17, specimen No. 75. This is a very good example of the ease with which archeological objects may be interpreted by modern ceremonial survivals, a method at present greatly neglected by writers on pueblo chronology.

⁴ Castaneda records cremation among the Cibolans (Zuñi) in his account of the Coronado Expedition (1540). Winship, 14th Ann. Rept., Bur. Amer. Ethn.

other ruins on the Little Colorado, but two rare broken specimens are worthy of special attention. They are made of polished bone, decorated with superficial incised ornamentation clearly indicated in the accompanying figures (pl. 8, *a*, *b*).

The objects, as stated in the catalogue, lay on or near a human cranium, a position indicating that they were hair decorations, and they are probably the same as the so-called *herunka*, or feathered head ornament, worn on the crown of the head by warriors or by the personators of the Little War God. Similar objects still survive in pueblo ceremonies. One of these (pl. 8, c), collected by the



Fig. 3.—War God and complemental female idol on the Oraibi Snake Altar. a, God of War wearing netted cap and bone hair ornament.

author at Zuñi in 1890, is shown in his account of "A Few Summer Ceremonies at Tusayan." The bone shaft by which this was attached in the hair was decorated with bird feathers and a fragment of abalone shell. A similar hair ornament is attached to the cap of an idol of the Little War God on the Oraibi Snake Altar, as shown in figure 3.

SHELL BRACELETS

Shell bracelets, armlets, and finger rings made of Pectunculus and other marine shells were very common in graves at Homolobi, Chevlon, and other ruins on the Middle Little Colorado, and were probably obtained from the Pacific Coast tribes. In prehistoric times there appears to have been a lively trade between the Southwestern tribes in pottery, shells (pl. 9), blankets, turquoises, and other objects. Even at the present day traders from the eastern pueblos resort to the Hopi for the purchase of blankets, which are bartered in exchange for turquoises and other valuables. The author witnessed at the East Mesa in 1891 what was said to have been a survival of the ancient fair, at which time a large number of pottery objects, native baskets, blankets, and other specimens were exposed for sale in the open space between Walpi and Sitcomovi, and a considerable number of Navajos and men from other pueblos were on hand as purchasers.

This interchange of material objects through barter was not limited to material objects, but songs, legends, prayers, rites, and ceremonies were also bought and sold, and thus traveled from tribe to tribe.

CONCLUSION

The author is conscious that this brief article is only a small contribution to the problems of pueblo culture, but it is an addition to our knowledge of an unknown area. One of the most important of pueblo problems is the interpretation of the sedentary culture of the Lower Little Colorado. We are in a fair way to have our knowledge of this area greatly enlarged by Professor Colton, who has already given much study to it and has published a very important article on the small house ruins. He has transmitted to the Bureau of American Ethnology for publication a still more comprehensive article.

The pottery from Young's Canyon resembles the poorly defined so-called prepuebloan found in the region north of the Hopi pueblos, and probably once spread over the greater part of what is now the State of Arizona. Similar pottery has a wide distribution, and has been reported from various points also in Colorado and New Mexico, but it is best represented on the Lower San Juan in the region called Tokonabi by the Snake people of the Hopi.

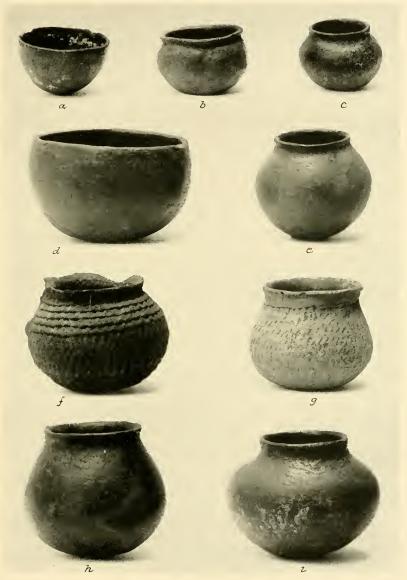
It will probably be found later that a culture not radically unlike that indicated by the ceramic and other objects from Young's Canyon, extended over the whole of Arizona north of the Mogollones from the Little Colorado to the San Juan, more especially in the eastern

¹ The Hopi personate a Katcina called the Trade Katcina, which the author has seen and figured, but of whose function he is ignorant.

part, and over the border into New Mexico, where we find evidences of a more thickly settled region, indicating that incoming people from the north, east, and south had united with it or modified it, and formed a mixed pueblo people. The survivors of this mixture are represented by inhabitants of the modern Zuñi and Hopi pueblos. especially the latter, which have conserved to our own time the least modified cultural elements of the prehistoric Southwest. There are many areas where intensive archeological work, both chronological and cultural, is much needed, but not one which promises more than the region about Flagstaff.

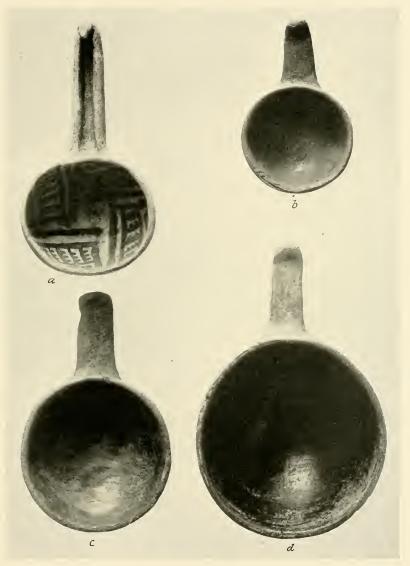
The forms, colors, and designs on the pottery bowls figured resemble those from the Black Falls, which as the author has shown are similar to those from an area in northern Arizona known to the Hopi as Tokonabi. Like specimens occur in sites situated in the East Mesa Wash and elsewhere in ruins not yet described. The author suggests that the name Tokonabi be applied to the culture area, which is a very extensive one, in which the ruins here referred to are situated. Neither the types of artifacts or architecture nor the boundaries of this culture can be determined without more field exploration.



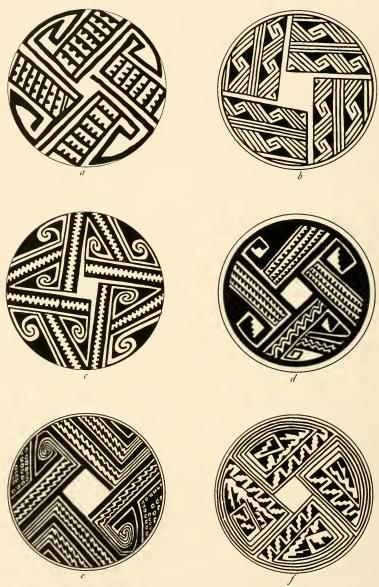




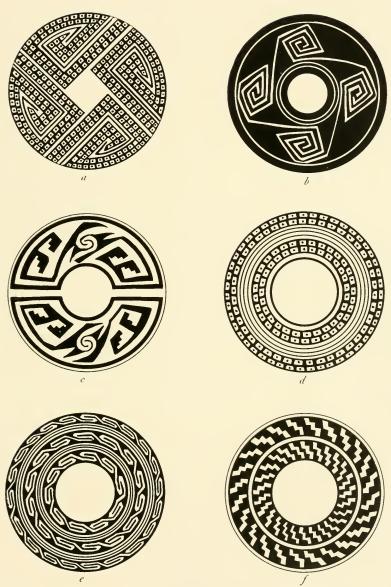
Pottery and bone implements from Young's Canyon cemetery, Arizona. a, Repaired broken bowl of red ware; b, bowl of red ware with black interior; c, food bowl of red ware with black interior; d, corrugated jar with one handle: c, f, bone needles. (Sizes: a, 3½" high, 7¾" diam; b, 6" high, 7¾" diam; c, 5½" high, 8½" diam.; d, 7½" high, 8½" diam.; e, 9" long. ½" diam.; f, 8" long. ½" diam.)



Ladles, a, Black and white ware with grooved handle; b, c, d, red ware with black interiors. (Sizes: a, bowl $3\sqrt[3]{"}$ x $3\sqrt[3]{"}$, handle $3\sqrt[3]{"}$; b, $2\sqrt[3]{"}$ in diam., handle $1\sqrt[5]{"}$; c, $3\sqrt[3]{"}$ in diam., handle $2\sqrt[1]{"}$; d, $4\sqrt[3]{"}$ x $4\sqrt[5]{"}$, handle $2\sqrt[4]{"}$.)



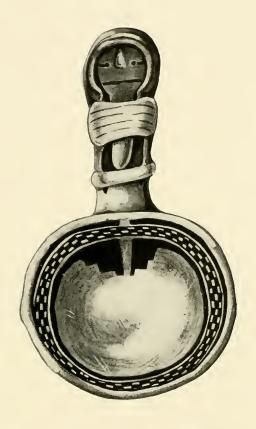
a. Design on ladle illustrated in pl. 3, $a:b\cdot f$, typical geometric designs on five food bowls of white ware decorated with black lines. (Sizes: a, $3\frac{1}{2}$ %" x 3", $1\frac{1}{2}$ %" high, $\frac{1}{2}$ 8" high, $\frac{1}{2}$ 8" high, $\frac{1}{2}$ 8" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 8. 3%" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 8. 3%" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 8. 3%" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 9. 3%" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 9. 3%" high, $\frac{1}{2}$ 8" diam.; $\frac{1}{2}$ 9. 3%" high, $\frac{1}{2}$ 9. 3%

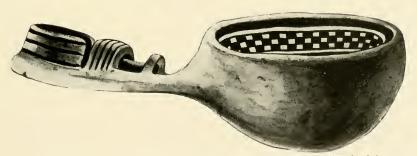


Decorated black and white ware. b, White or negative design on black base: c, inter-locking spiral on interior of bowl of a ladle with handle broken off: a, d, c, f geometrical designs. (Sizes: a, $3\frac{1}{2}$ " high, $6\frac{1}{4}$ " diam.; b, $3\frac{1}{4}$ " high, 6" diam.; c, $4\frac{7}{8}$ " x $4\frac{1}{2}$ ", $2\frac{1}{4}$ " high; d, $3\frac{1}{2}$ " high, $5\frac{1}{2}$ " diam.; c, $3\frac{1}{2}$ " high, $5\frac{3}{4}$ " diam.; f, $2\frac{1}{2}$ " high, $4\frac{3}{4}$ " diam.)

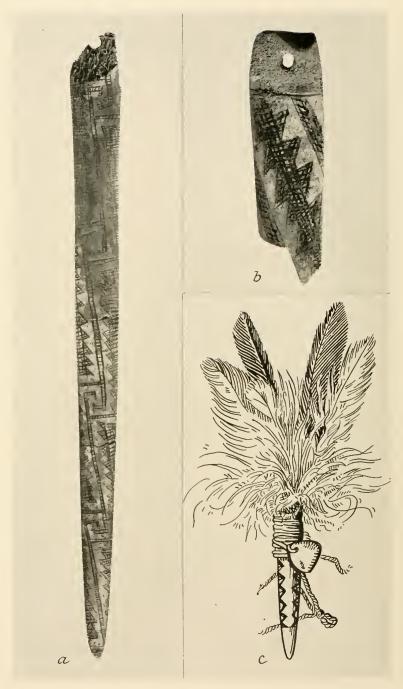


Black and white ware ladle with cradle handle, from Young's Canyon cemetery, Arizona. (Size: Bowl, $3^3s'' \times 3''$, handle, $3^3i''$.)

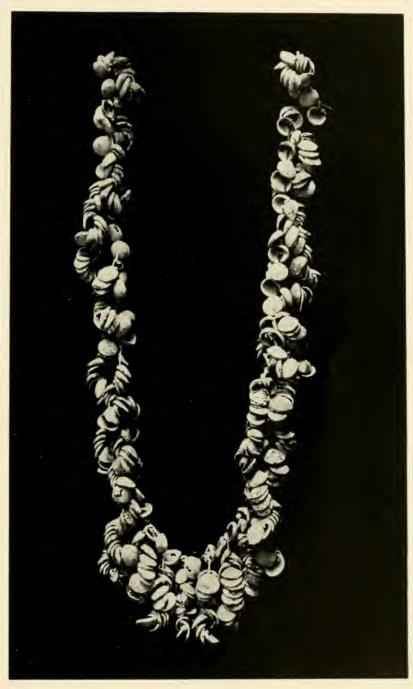




Black and white ware ladle with cradle handle from ruin near Holbrook, Arizona. (Field Museum, Chicago.)



a, Bone hair ornament (herunka) with incised decoration found with a human skull; b, broken hair ornament with incised decoration; c, modern Hopi hair ornament with attached feathers and turquois; made of hone with incised decoration. (Sizes: a, 1018" long. 13" wide: b, 4" long, 138" wide.)



Necklace made of small shells found with a skeleton.

