

DECORATIVE DESIGNS ON ELDEN PUEBLO POTTERY FLAGSTAFF, ARIZ.

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INTRODUCTION

Elden Pueblo, located 6½ miles east of Flagstaff, Ariz., was excavated in 1926 by Dr. J. Walter Fewkes and his party for the Bureau of American Ethnology. This work, carried on with Doctor Fewkes's characteristic skill and experience, contributed much to our knowledge of the archeology of this region. Dr. H. S. Colton, of the University of Pennsylvania, who has for several years investigated and published on the ruins of this portion of Arizona, called Doctor Fewkes's attention to the Elden ruin and subsequently aided in the field work. Doctor Fewkes's report (1927) leaves little to be desired regarding all phases of the exploration. The present paper is confined to a study of the decoration of the Elden Pueblo ceramics collected by Doctor Fewkes.

Intercourse by Indian groups scattered over a very wide region in northeastern Arizona was promoted by the prominence of San Francisco Mountain in Pueblo cult. In Pueblo mountain worship the peaks were regarded as shrines, and tribes came from great distances to them for worship. Cloud, rain, and water cults were ordered in response to the meteorological energy of the high peaks, which affected the weather over thousands of square miles. The Pueblo Indians had probably observed the relation of the mountains to weather phenomena centuries ago.

San Francisco peaks as a cult focus would thus be responsible for any introductions of foreign elements in the materials from ancient pueblos. This is merely suggested as one of the ways that intrusive specimens arise, especially from regions widely separated.

POTTERY

General remarks.—Elden Pueblo is classed as a gray-ware site, one of the many northern type settlements penetrating the Little Colorado region and situated south of the great escarpment called the "rim." It is evident that this ruin dates from the Great Period of Kidder and that it was established a very long time before the

intrusion of a development of the varied polychrome ceramic art of this region.

There is no longer question that the focus of the gray-ware art was in the San Juan drainage, since Dr. F. H. H. Roberts's explorations in Pueblo I ruins in the Piedra district show not only the beginning of Pueblo Indian pottery, but also that the first ware was of the gray type. (Roberts, 1930.) This is a clear case of the influence of environmental clays on the formation of a ceramic type. With this fact in view, the polychrome, orange, yellow, and brown classes are seen to depend on the original sedimentary clays of the Jurassic and Cretaceous and resedimented clays from older and later periods spread out on the eroded strata.

Over a very large area north of the Little Colorado, archeologists have noted in small house sites shards of gray ware on which the decoration appears faded. These sites, which were much weather-worn and gave an impression of antiquity, were for a long time an enigma. More intensive work in the Pueblo region has revealed that this ware seems to have been dispersed from the Kayenta focus during Pueblo III period. It may be surmised that the distribution of gray ware of the class mentioned was toward the south and west from the Kayenta focus. This is borne out by the character of the decoration (see pl. 1 and pl. 3, fig. 3), which may be called diffuse, while from the other major focus in the San Juan appears to emerge the sharp-cut designs in dark pigment not covering the whole surface of vessels. The priority seems to be with the San Juan, but the greatest development in an art sense occurs to the westward, and its distribution is southward in Arizona. Placed on Doctor Kidder's base map graphically, the gray-ware centers are shown in Figure 1. The dimness or clearness of the decoration is probably due to the medium used, possibly water in the case of the faded designs and seed oil in the clear ones. With the iron pigments, water would give a thin paint and oil more of a mass of color. (Hawley, 1929.)

Evidently the gray ware continued over so long a period and became fixed to such an extent that when a group of Pueblo Indians moved into a locality where it was not possible to obtain the clay to produce the ware, they practiced slipping with white clay over a local body, the kaolin evidently being brought in small quantities from a long distance or obtained from detritus from old formations.¹ There is evidence that halloysite, a white claylike mineral near to kaolin, was gotten from the ancient gravels along the Little Colorado. Halloysite shrinks considerably and tends to warp in firing, a feature noticed frequently in southern gray ware.

¹ Kaolin for ceremonial purposes is brought by the Hopi Indians from a butte southwest of Walpi, where novices are taken for their initiation into the fraternities.

It is necessary, of course, to treat each site or contiguous groups of sites as a unit, and to study the developments of the potter's art locally. Later it may be possible on the completion of such studies to bring to bear correlations covering larger areas. By this means we may trace the spread of types of ceramic art from an original focus and allow for expedited or retarded developments in the unit sites, and also estimate the dates of pronounced styles of decoration. The study of the Elden ceramics is made on this basis. Gray ware in pueblos that represent the consolidations and siftings of tribal decay and movements reflects in its heterogeneity these movements. A typical case is the confusion of forms and designs in Kidder's adobe pueblo near the Pecos ruin.

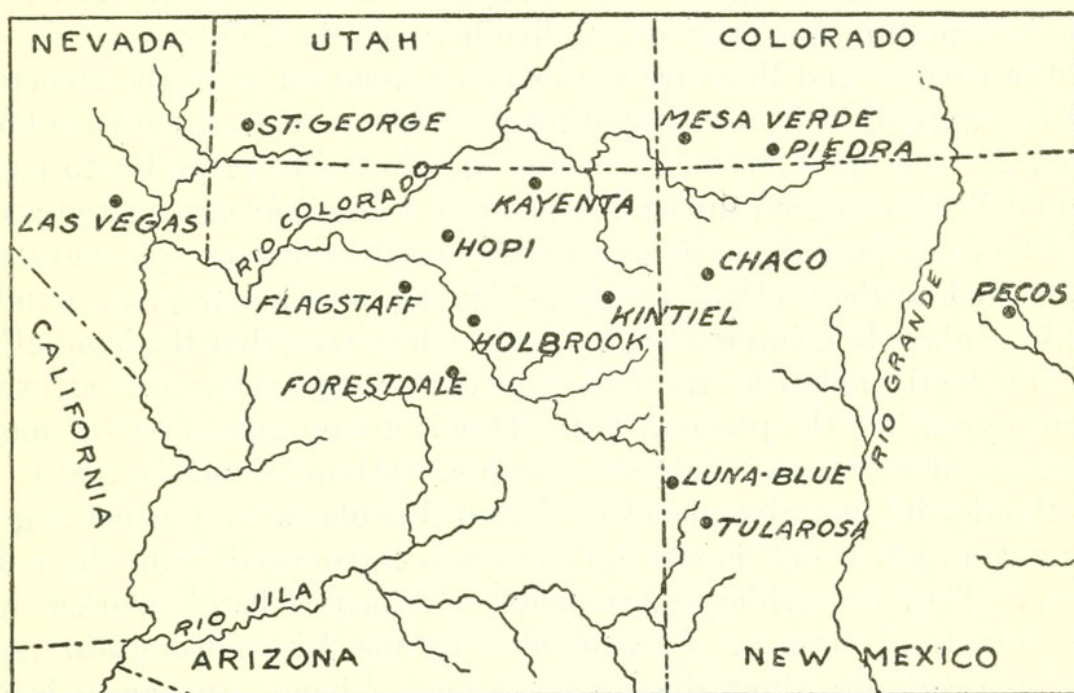


FIGURE 1.—Map showing gray-ware centers, Rio Colorado and Rio Grande regions

Description of the designs.—Elden gray ware divides itself rather sharply into two classes of decoration, one in bands and the other in quadrants.

In bowls the band decoration leaves a circular area in the bottom and the 4-part design a square area. (Pls. 1, 5.) The bands enforce the seriation of the design elements in repetitions, and do not allow the exercise of the ingenuity that is possible with the quadrants.

Band decorations are very old in the pueblo region. They may be said to originate in the partial decoration of the earliest pottery, the lip borders and shoulders of the ware being ornamented with clipped designs framed in a restricted space. The character of these designs leads one to believe that the disintegration of symbolic motives into patterns may be earlier than has been thought. The

Elden band designs considered in connection with the character of the forms and other criteria of the pottery so decorated indicate that this ware is the oldest found in the pueblo.

The simplicity also of the band designs gives the ware the aspect of maturity, and there is a fixity of the decorative art of the potters not observed in other gray ceramics thought to be of a later period. It is possible that an examination of the stratigraphy at Elden Pueblo may corroborate this assertion.

Band designs are accompanied by parallel stripings; the lines are continuous around the concavity of a bowl or the swell of a vase, their purpose being to border or to space the bands. (Pl. 1.) Rarely short, unmodified lines were used in the decoration of the banded ware, and these outline the central symbol of the repeat. The horizontal lines number from one to five between the bands.

Both bands and lines are applied in agreement with the structure of the ware, that is, on the coiling junctions, which are always horizontal. The lines probably do not originate in the desire to simulate coils showing on the surface, as in the familiar corrugated ware. In the early period corrugated pottery was made very sparingly and appeared on the necks of vessels as flat strips rather than as rounded relief coils. It is interesting to observe, however, that the band effect is frequently noted on the finer coiled ware of a later period, when coiling reached the plane of art. This is accomplished by the modification of a series of coils at intervals. (Hough, 1903, pl. 80.)

Bands did not disappear at Elden Pueblo with the coming of quadrant art, which is also old and was introduced from the north here. They are evident in the short sections of bands worked into the quadrant figures. Occasionally in the Little Colorado polychrome ceramics short diagonal sections of bands appear in bowls. A discovery of this sort from the Petrified Forest shows a departure from the customary structural type and seems to be purely decorative. (Hough, 1903, pl. 15.) The canteen (pl. 5, fig. 2) shows that at an early period sections of bands were used in decoration.

The fine specimen shown in Plate 2, Figure 1, is the most archaic in feeling of the vessels decorated in band patterns. The decoration is suggestive of the coiling lines discussed above. Interposition of parallel line bands with diversified bands is seen on the large bowl shown in Plate 2, Figure 2.

Allied to the band series are all-over designs made up of a network of interlocking diagonal strips applied to the interior of bowls. (Pl. 6, figs. 2, 3.) Doctor Fewkes was especially interested in these unique designs and figured them in his report (1927).

The designs in quarters, or quadrant designs, which are frequent in Elden gray ware, seem to mark a profound change in Pueblo

ideas of cosmogeny. The change seems to have been based on the axial or square cross developing from the use of sunrise and sunset as datum points for the regulation of ceremonial periods. The arms toward sunrise and sunset from the position of the observer would, it is conceived, insensibly require balancing by other arms extending north and south, thus dividing the earth into the quadrants of Pueblo mythology.

When this change took place is not determined, but it appears likely that it began at Elden in Pueblo III following a considerable development in pottery decoration through the preceding periods, fostered by a similar evolution of ceremonial practices and beliefs.

The adoption of the 4-part design relieved Pueblo ceramic art from pettiness and laid the foundation for the majestic decorations of the Great Period. Not only were boldness and variety introduced, but the idea of motion or rotation appeared with the world region cross, noting an advance in cosmogenic conceptions. Few designs of this character lack the element of motion.

Designs in other numbers are in the Elden collection, but these are either merely repeats or fives, apparently based on optional spacing of the area to be decorated. The so-called triskelon, three divisions, rather frequent in the Mesa Verde region, is not found at Elden Pueblo. One inexpertly decorated bowl of the lined background class, to be mentioned later, shows a decoration in three parts. (Pl. 7, fig. 6.) One curious specimen is a vase decorated with five bird conventions in geometrical figures, a hooked design outlined in black set on a lined background. Generally this design is interlocked with an opposite crooked design, producing a flowing pattern. In this case the figure is wrenched from its context.

Of decorations put on to cover pleasingly the whole surface of a vessel there are a number in the Elden collection. The design is a repetition of a simple motive, as a terraced figure connected and running diagonally, generally on vases. Sometimes broad bands in bowls are of this character. The age of this style in decorative art is incontestable; also it does not come down to modern Pueblo art. In this respect the ancients were more advanced than the modern pottery decorators. It appears to originate in the border ornaments of ancient pottery mentioned on page 3. In this style there is no number order recognizable, but there is skill displayed in spacing so that the design will connect evenly. The bold and smooth march of the decoration would seem to indicate a use of metrics, so great is the difficulty of spreading equally the design diagonally over curved surfaces with no guide of stitches, as in weaving and basketry. It is not possible, however, to assert that anything but free hand was employed by the potter.

A specimen of globular vase with the handle decorated in small squares and oblong narrow strips of black and white was found at Elden Pueblo. (Pl. 4, fig. 2.) This sliced design is curious and appears to relate to the ruled squares or mosaic pattern. The design is something like the Kayenta examples figured by Kidder (1924, pl. 31, fig. b). Another vase has the white background divided into squares. (Pl. 4, fig. 3.)

A residue of pottery that must be placed in the class of individual or extemporaneous designs is interesting as showing the mutations of art arising in an enclave where traditional forms rule. Generally such designs show a softening of the authority of traditional concepts and usher in the proliferation of designs so marked in the Little Colorado area. The extent of this change is especially appreciated when there appear new designs not derived from the ancient formula.

This class may be termed "lined-background gray ware." (Pl. 7, figs. 5, 6.) Its distribution has not been worked out. A specimen from Mesa Verde is figured by Kidder (1924, pl. 25, fig. left 3), and one from Blue by Hough (1914, p. 48), so that its range is wide, and this type may prove valuable in distribution study.

Not only are the designs notably different, but their connection with an intentional background renders this ware unique. Except as noted, the use of a painted background is not found in Pueblo ceramic decoration.

The decoration used universally by the Pueblo potters produces an interplay of decorated and undecorated areas characteristic of good design, but in many cases the observer is left in doubt as to whether the painted or the clear spaces form the pattern. In the development of the decoration to the high point to which the Pueblos carried it both ideas may be true. Originally, however, the painted figures were to be read as the meaning of the design.

The backgrounds of the class of ware mentioned are gradined with close parallel lines not systematically inclined over the whole area, showing lack of skill. The obvious intention is to set out the design in white, a departure from the general intent of the painted design.

Lining or hachuring of opposite elements of Pueblo designs is uncommon in the Elden ware and appears to belong to a later period than the banded and quadrant-decorated specimens. The intention of hachured designs is obscure. It can be for variety or may have a symbolic meaning of duality. (Hough, 1914, p. 50.) This treatment almost completely passed out of use at the close of the Great Period and the time of the discontinuance of gray ware, about 1250 A. D., as derived from dates furnished by Dr. A. E. Douglass from Pueblo Bonito beam chronology.

Red ware at Elden Pueblo in recovered specimens is scanty. The per cent of red fragments in the *débris* is not indicated, but it seems probable that the proportion of red ware to the gray is in line with its occurrence in typical gray-ware sites.

Red ware is primarily a gray-ware body washed with ocher and represents the first application of surface color in the Pueblo region. An inferior paste was used, producing fragile vessels usually faring badly in burial offerings or in chance occurrences in *débris*. The true proportion of red to other wares, therefore, is not found in the recovered ceramics. A rough estimate of the proportion may be arrived at by making a percentage count of shards in the *débris*, and it is recommended that this method be followed.

Of the few pieces of red ware from the Elden Pueblo collection, there is selected for description a bowl of Proto-Kayenta type decorated in red stripes outlined in black on a buff base, the designs simple and conforming to the quadrant arrangement. (Pl. 9, fig. 2.) As only a few examples were found, and as there was an absence of similar shards in the village *débris*, it appears likely that this pottery came directly from the Kayenta art focus. Another well-preserved bowl of rather thick ware was probably of ceremonial importance. The interior is decorated in black with a band of terraced figures arranged between series of five parallel lines as in the band class. On the exterior are white horizontal lines, and eight representations of human hands in white between two ribbons of white. On the bottom ring of the bowl is a circle of miniature hands, bird tracks, and other figures now obscured by rubbing. (Pl. 9, fig. 3.) Since occasionally specimens of this description are found in the Little Colorado area, they appear to show southern influence on the San Juan red ware.

Another variety of red ware has a deep-red interior decorated with black outlined with white. The exterior is dark-yellow ocher with a band of red washed on roughly. The paste is homogeneous and granulated with small quartz pebbles. This class of red ware is widely distributed, occurring in quantity in the Little Colorado region and south of the escarpment on the streams of the Gila-Salt drainage.

A small, thin wall bowl of dark-red ware with design in narrow lines may be regarded as another variety closer to the southern than to the northern type. The paste of this and of specimens from the Little Colorado Valley, found usually in small house sites, is so perishable that the damp vessels can rarely be removed entire from the ground.

A second bowl of this character has a gradined background outlying a swastika figure built on the prolonged sides of a square.

The arms are terraced, as in the normal cloud design, but each has two conventional eyes, suggesting that the stepped figure is intended to represent an animal, probably a bird. This is a startling design. (Pl. 9, fig. 1.)

It is seen that Elden red ware takes on the variety of paste and design of the polychrome area characterizing the valley of the Little Colorado. The presence, however, of Proto-Kayenta polychrome in the finds at Elden Pueblo is in keeping with the large proportion of quadrant clear black decorated gray pottery recovered from this site by Doctor Fewkes. The other reds are as stated, southern and seemingly later than the Proto-Kayenta ware—as is the gradined background type with aberrant designs.

Elden coil ware bowls all have polished black interiors. The coil treatment is parallel or diagonal. (Pl. 10, figs. 1-5.) Some specimens are deeply furrowed and others slightly smoothed down, as in southern coil. One bowl has a handle. The colors are gray, red, and deep brown. So far as the artistic treatment of coiling is concerned, the Elden potters were resourceful. One red bowl has a coiled exterior, a feature very rarely seen in specimens of gray ware. One globular vase is surfaced with fine parallel coil, and a good effect was produced by small wedge-shaped indentation on the coil. (Pl. 10, fig. 3.)

As usual, two forms are found at Elden: Bowls, sometimes deep, and vases. The bowls have an everted rim and in some case a smooth band under the rim. They vary considerably in small details of form. (Pl. 10, figs. 6-9.)

The preponderant pottery at Elden is a thin, red-brown ware used for domestic purposes. In most cases it is carefully finished, but no decoration is ever applied to it. The surface is generally of varying shades of color due to open-kiln firing. In bowls of various forms the interior is smoke blackened, giving a lustrous surface. The everted rims of globular vessels appear to be painted with the black pigment used in the decoration of the gray and red ware. Obtaining a smoke-blackened interior and at the same time an unsullied exterior is to be regarded as a triumph of the potter's skill. (Pl. 10, figs. 6-9.)

Brown ware rarely occurs in northern gray-ware sites, but it has an extended distribution in the Little Colorado Valley, over the rim into the Gila drainage, on the Lower Colorado, the desert country along the southern boundary and into Mexico, and in the Shoshonean area of southern California. It appears to be a product of local volcanic clays. In parts of this region brown ware is the sole ceramic product; in others it accompanies the polychrome or other local decorated pottery.

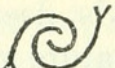



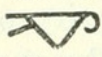
The forms of brown ware are ordinary bowls, deep globular bowls, globular vessels with rim, cups, dippers, miniature vessels, and quasi-archaic figurines of animals (see pl. 10), showing that its use is far more comprehensive than the gray ware. It is noted that the plain brown ware exhibits no handles. There is much ground for the belief that the brown ware is the basic type of the majority of the Pueblo ruins in the southern areas, and we frequently observe that gray ware has been superimposed upon it, as at the Elden site. The unctuous volcanic clays no doubt played an important part in this matter.

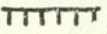
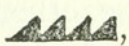
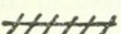



The finds at Elden Pueblo contain but two specimens of modeling exclusive of the rude brown figurines mentioned. One is a bird-form vessel (pl. 8, fig. 1) in red-brown ware, a type occurring widely in the Pueblo region in sites of every class of ware, the best specimen being the gray example from the Tularosa in the United States National Museum. The other is an outstanding gray-ware quadruped-animal-form vessel related to examples found in southern gray-ware sites, such as the Tularosa pueblos. The figurine appears grotesque, but it is probably intended to represent a deer in the act of "belling." (Pl. 8, fig. 2.) The painting is pale, as if faded, giving the specimen the appearance of antiquity as observed in the band decorated ware. It may be assumed that this specimen was brought to Elden Pueblo from some other locality, perhaps Kayenta, where like specimens have been found.



Motives.—It is apparent that the whole decorative field of the Elden pottery is elaborated from the bird motive. The bird symbol, which comes under the definition of a symbol because it is a figure expressing a complete idea, is in its early form not realistic, but the two engaged spirals or geometric plans generally arising each from a triangular or wedge-shaped base are taken to be the body of the bird. This symbol is seen in the banded specimen (pl. 2, fig. 2) believed to be the simplest form, and as such occurs on the earliest pottery.

Its origin is evidently not with the earliest pottery discovered by Dr. F. H. H. Roberts (1930) in the Piedra, where it occurs as a complete symbol, but probably was anteriorly developed as a religious symbol and used, as it was in Hopi fraternities, on perishable cult paraphernalia. No other symbol is so spread in space and time as that derived from the bird, and it may be asserted that it is characteristic of ancient Pueblo ceramic decoration.

The bird symbols occur in various stages of convention on the Elden pottery, but, as stated, they are always conventionalized. Also, the figures are as a rule represented as two birds in apposition. The simplest and probably the most ancient form seems to be

curvilinear, as  expressing motion, which may be units or joined in a scroll; the bird's body is shown, either in the curvilinear or geometric method, as a triangle  , or the clipped decoration may be a simple triangle  sometimes supplied with head and tail  (Hough, 1914, p. 48, fig. 85), and this seems to occur much later than the period of the Elden ware and at a time when a 4-bird convention became prevalent in Pueblo art. The 2-bird symbol is the rule in Elden Pueblo pottery, only one bowl, unmistakably of the latest period of Elden art, having the 4-bird symbol. This bowl (pl. 7, fig. 3) is the only specimen having a design in the plain circular area of the bottom.

The list of small units of design in the Elden pottery is not long. Those that are not clipped symbols, as the bird symbol simplified in various degrees, are the toothed line , occurring here in a very few instances; the serrated line , in which the triangular serration points are slanted diagonally and when drawn in apposition inclose a zigzag in white; very rarely a line crossed diagonally with short lines, ; a terraced figure , sometimes representing a bird's head having offsets or terrace designs in apposition, producing a stepped white line; terrace figures built up of blocks  used in all-over decoration; oppositely placed bird convention ruled into blocks like mosaic ; areas of small blocks with dots in

the center, called plumage design ; the same stopped out with black, leaving a white circle with dot in a black area, a customary method of producing an eye; designs in small white squares in a black field; series of diagonal parallel lines used to separate figures , or bands and hachuring; short lines connecting or completing figures in composition; wide black stripes outlining figures in apposition with similar figures hachured.

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