

Trait Complexes at the Angel Site

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Introduction*

After thirty months of exploratory activity at the Angel Site it is possible to present, in rather brief form, a general list of the material traits and cultural elements which have been produced by the excavations.

Materially and culturally the Angel Site appears to match very closely the Kincaid Site located near Metropolis, Illinois. A relationship with eastern Tennessee is suggested by the close correspondence in many traits established for that area by Webb and Lewis. Generally speaking, the Angel Site seems to be more productive and culturally richer than any other site so far reported upon. Whether this anomaly is due to the relative amount of work and time devoted to the sites in question or whether the other culturally related sites were only the poorer relatives of our local inhabitants remains to be determined.

It should be understood that this trait discussion is tentative and not statistical. It should also be understood that before final treatment is completed, methods will be devised for handling the data on a strictly non-personal mathematical basis, at which time trait tables of a definite informative nature for a Middle Mississippi site will be obtainable.

Agriculture and Food Getting Activity

Agricultural complex. Corn was cultivated and grown at the Angel Site in quantity. Evidence of this is attested by the discovery of large quantities of corn cobs and shelled corn, stored in pits both inside and outside of houses. This material will be studied by the Department of Botany at Indiana University under the direction of Dr. Paul Weatherwax, who is a recognized authority on the origins of Indian corn.

No evidence has been found as yet to substantiate the belief that gourds or melons were also cultivated.

A few beans, one of which has been tentatively identified as a lima bean, have been found.

Also forming a part of the agricultural complex are hoes, made from the fresh water unio, and spades manufactured by chipping from flint and chert.

No scapula hoes have been found to date.

Animal food complex. Osseous remains of mammals are extremely abundant. These represent all of the mammals indigenous to southwestern Indiana, as well as some which are now extinct.

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All mammal, bird and reptile bones have been meticulously preserved and will be identified and counted by species by a comparative anatomist.

Fishing complex. The remains of many species of fish are found in the refuse deposits. Among these are the drumfish and the catfish, as well as many others which remain to be identified.

Bone fishhooks, as well as blanks which show the processes used in manufacture, are a part of the material complex. Freshwater unios are found in abundance, both in small pits and scattered heterogeneously throughout the refuse deposits. The fresh-water mussel apparently formed an important part of the diet.

Impressions found on certain potsherds indicate the manufacture and use of a cord net, not unlike those still manufactured by contemporary river men in the neighborhood. It is not definitely known that these nets were used in fishing but is so placed by inference.

Obviously nothing is known of the use of fishweirs or traps at this site. Physical conditions, in the form of a slack water slough at the site, suggest the possibility of fish trapping.

Military and Hunting Activity

Projectile complex. The typical projectile point for Angel Site is a small, thin, triangular point having either a straight or a concave base. Modification of the triangular type is a point having small notches on each side and in the base, closely following the type found at the Cahokia Site. This type is, however, a rarity at the Angel Site.

Larger points may have been used as knives or lance heads and are of relatively infrequent occurrence. Notched and stemmed points occur throughout all levels of the site at infrequent intervals.

Architectural Activity

Mound complex. The larger mounds of the Angel Site are truncate pyramids, either square or rectangular. The large mound is a bi-level, truncate structure with graded ramps approaching each level. A conical mound is offset on the southeast corner of the upper level of this mound.

Mound F, upon which exploration has been conducted, is built of small loads of vari-coloured soils. There is some indication of spreading of loads rather than lump deposit.

This mound contains a primary mound upon the top of which at one time stood a large council house. This house was rectangular in shape and consisted of at least two rooms, the southernmost of which had a clay seat built up around the four walls. Appended to this structure along the east and west walls were anterooms, or porticos, as suggested by small groupings of regular post mold patterns.

It is not known at this writing whether or not another mound will be found below the primary mound but there is reason to believe that a burned structure will be located upon the original surface below the primary mound.

An unexpected feature was the discovery of a row of post molds completely encompassing the flat top of the primary mound. These post molds indicate the former presence of a stockade surrounding the council house.

Fortification complex. The village was surrounded on all sides except that bordered by the river by a series of log palisades. On portions of the site which have never suffered from cultivation the earthen embankment which was thrown up to help support the logs in a vertical position is still in a good state of preservation. The location of this embankment in cultivated fields can be followed by means of aerial photography and close contour surveying.

Portions of the palisade so far explored show that large logs were used to form a vertical wall with projecting bastions at approximately one hundred twenty foot intervals. The irregular spacing of the palisade log molds suggest that a wattle and daub method of construction might have been used for a wall surface.

A smaller trench and series of post molds have been found to parallel the outside edge of the principal palisade. Whether this small structure was a means of primary defense or a buttress to prevent erosion of the principal palisade embankment remains to be seen.

At the southeast corner of the village a heavy trench parallels the inside surface of the principal palisade and expands away from it gradually to a point beyond the second projecting bastion. It, too, is a large trench and contains relatively large post molds. At this writing it is believed that this trench formed a sally port entry into the village and which, by its construction, could effectively prevent the entrance of undesirable persons.

Village complex. Domestic houses were rebuilt repeatedly over one another after destruction. Evidence suggests that a house no longer serviceable was burned and a new house built upon the site. A confusion of overlapping post patterns result from this trait. Houses were constructed by placing posts vertically in trenches at more or less regular intervals. The four walls thus formed were covered with cane, inside and out, over which mud, mixed with straw, was plastered. Daub wall fragments are found abundantly throughout the refuse deposits. The impressions formed by the straw and grass mixed with the mud are so clear that we hope to be able to identify the floral species so used.

The finding, occasionally, of swatches of grass which have been burned suggests that grass thatched roofs were used. This thesis is corroborated, in part at least, by the numerous mud dauber's nests found in the debris and which, invariably, have upon one surface the impressions of the grass roof to which the mud dauber attached its nest.

On two occasions houses formed of very large logs have been found. In each case large post molds, to the number of four, were found equally spaced in the interior, at the four corners. It is believed that this slight variation in method of construction need not represent any cultural sequence but, more possibly, a distinction in house type

for winter and summer, a trait for which there is some historical documentation in the southeast.

Fireplaces are circular, made of puddled clay and are centrally located, presumably beneath a roof smokehole. Little elaboration in fireplaces has been noted and they number from one to three for each house. Interior furniture, in the form of couches, support posts, etc., is suggested by the presence of a multitude of small post molds in the house interiors.

Although no definite statement can be made in respect to unit groupings there is a suggestion that each house was accompanied by its series of storage pits, corn cribs, sweathouse, skin drying racks and other domestic paraphernalia.

To date, the houses seem to be oriented with the corners to the cardinal points. Whether this is intentional, or accidental due to the physiography of the site, cannot yet be stated.

Burial Complex

All forms of burial disposal, except cremation, have been found at Angel Site. A partially burned adult male bundle burial was found between the legs of an adult female extended flesh burial. Burials of adults and children are found throughout the village area. Infants are occasionally found beneath the floors of houses.

Burials are extended, partly flexed and fully flexed. They are found laid upon soil levels and covered with debris, also interred in rectangular or round graves dug into the sub-soils. Two instances of urn burials have been found. One was the bundled bones of an adult male in a large, previously broken pottery bowl; the other was the tightly flexed flesh burial of a child in a large pottery bowl. With two exceptions, grave goods do not accompany burials.

The burials are oriented to all points of the compass and no evidence of bark or wood coverings exists. Bundle burials have been found in slate slab graves within the east slope of Mound F. An extended flesh burial which had been subsequently disturbed by the interment of another individual had, along the left side, fragments of slate slabs. This latter burial was in the village, indicating that stone lined graves need not be limited to burials intrusive in the mound.

Industrial and Artistic Activity

Chipped stone complex. Large, lanceolate flint blades are infrequently found.

Drills are relatively non-specialized, being mostly chipped secondarily from a spicule of flint. A few, however, are well made and are of the expanded base type.

Scrapers consist of irregular flakes of flint with reworked edges.

Chisels are well made, usually from chert and have highly polished, sharpened bits.

Celts, like the chisels, are at times polished to a degree which completely obscures the flaking technique.

Spades of varying size, expanding to a convex bit, are infrequently found. The bits invariably show an extremely high polish from long use.

Flake knives, composed of a rectanguloid, sharp edge flake struck with one blow from a flint core, are found with considerable frequency. One core of grey Harrison County flint from which such flakes were struck has been found to date.

Triangular points, which naturally constitute the most common chipped flint objects, have been previously discussed under the projectile complex.

Ground stone complex. Celts are the most common object occurring under this category. These are pecked from igneous rocks and usually have a high surface polish. They are generally rectanguloid in outline, with straight sides and a convex bit. A rarity is a rectanguloid form having incurvate sides and a flaring bit.

One full grooved axe has been found to date.

Abrading stones are numerous and consist of small blocks of sandstone having one or more grooves in the several surfaces resulting from a wear as a bone or stone sharpening medium.

Anvils, as a rule, are unspecialized river boulders having pecked indentations on one or more surfaces.

Bicaves of stone are both perforated and unperforated and are of infrequent occurrence.

Discs of slate, shale and cannel coal are of infrequent occurrence.

A fragment of a slate gorget, of rectanguloid form, probably having two perforations, was found near the surface in Division W-11, Sub-Division A. Another gorget fragment was found at a greater depth in the same Division.

A circular gorget made of black shale is unique. One one-fourth of the complete object was found but this represents a section large enough to indicate that it had originally been divided into four segments by deeply incised lines. The one segment recovered has an equal armed cross cut into one surface. The small perforation near the periphery suggests the method of attachment or suspension. On the reverse side faintly scratched lines form part of a highly conventionalized figure.

Mortars to the number of three have been found. Two are large river boulders having shallow concavities in one surface. The third is a large, rectangular block of sandstone, much worn on the upper surface and resembling nothing more than the true metate of the southwest.

Hammerstones are all, with one exception, unspecialized boulder hammers, the one exception being a well made, full grooved hammer made of diorite.

Stone pipes are limited in number. Two merit especial attention. The first is a vase shaped pipe of sandstone having a human face crudely depicted on the surface opposite the stem opening. The second pipe, of a disc type, is made from Minnesota pipestone, or catlanite. A reptile, presumably a rattlesnake, is etched in plan on the bottom surface of the stem, while on one side surface the reptile is etched in outline.

The balance of the stone pipes are of the elbow, bi-conoidal type.

A single stone plummet was found at a depth of two feet in the village deposits.

Many saw-like knives of sandstone have been found throughout the exploration. These objects usually have one cutting edge but sometimes have two or more such cutting edges. Blocks of stone and hematite, in the process of being shaped into some specific form, have been found with grooves cut into the surface in such a way as to suggest that the specimens under consideration may have been used as saws for sectioning stone.

Small slabs of sandstone having at least one well smoothed surface were probably used for grinding and mixing of pigments. In two instances palettes were deeply stained with color, one red and one yellow and have probably been used in painting with red and yellow ochre respectively.

Bone complex. Antler projectile points are common. Some have a projecting basal tang while others have an unmodified truncate base. All of them are small, suggesting that they were used as the penetrating medium on a bow propelled projectile.

Large quantities of antler tines, both worked and unworked, are found throughout the excavation.

A single antler punch, cylindrical in shape with oblate ends, has been found to date.

Bone awls are the most common objects in the bone complex. They are found in all degrees of specialization and are made from animal as well as bird bones. Entire leg bones of mammals and birds, such as the ulna of a deer or the metatarsal of a turkey, are the most frequent type. Others consist of splinters of bone, either mammal or bird, having one or more ends ground to a point.

Astragalus bones of the deer and elk, with two or more surfaces squared and polished, are found with considerable frequency in the village refuse. These objects could have been, and probably were, used as dice in gaming.

Bone beads may be considered a rarity, four having been found to date.

A single bone beamer, made from deer bone, has been found to date. This object should be considered distinctly exotic, not only to the Angel Site but to the Middle Mississippi culture pattern as a whole.

Two effigies of bone have been formed by slightly modifying natural pieces. The first, and most interesting, is a "death's head", made by drilling three indentations, properly spaced, into the femoral joint of a young deer. The second is the effigy of a bird, formed by modifying the shape of a deer antler tine and the incising thereon of a mouth indentation.

Fishhooks have been mentioned previously. They are common, of varying size and all have notched shafts for line attachment. None of the specimens found to date are barbed.

Bone flutes made of the leg bones of shore or wading birds are not common, only five having been found to date.

Deer phalanges, with the proximal joint cut off to form a truncate base and perforated through the distal joint, were probably used as rattlers or tinklers on the fringes of garments or garters in much the same way as were brass cones and thimbles of historical times. They may also have been used as part of a cup and pin game.

Next to bone awls, pins are the most common bone object. They are made from mammal leg bone sections, usually pointed on one end only, with the other end truncate. They are invariably highly polished. Ends, as a rule, are unspecialized but occasionally one is found with a spatulate end or grooved, as if for suspension or attachment. Quite often, sets of pins are found numbering from four to seven. These, invariably, are of a small size, having one end sharpened to a point and the other end oblate. The conditions under which these are found lead one to question whether they were inserted, at one time, into a wooden handle as a form of comb.

Rings are found to duplicate similar objects made of pottery. They are pulley-like in shape and were probably used as an adornment for the ear rather than the finger.

Bone tubes consist of midsections of wading bird leg bones, made by removing the joints and polishing the truncate ends. They are otherwise unspecialized.

Among miscellaneous bone objects are fragments of terrapin plastron and carapace objects, the edges of which have been cut and polished.

A fragment of human skull which had been used as a container or ornament was found in a debris deposit. The remnant at hand indicates that the calvarium had been modified by cutting and polishing the edge and scraping of the exterior surface. Faint traces of red pigment suggest that the outer surface may have, at one time, been painted.

Perforated teeth of bear, raccoon and dog are of common occurrence. Worked beaver incisors are also found.

Shell complex. Objects of shell consist largely of hoes and other unios, worn in such a way as to indicate use as spoons or scrapers. Two shell earplugs have been found, both with an adult burial. Beads of shell are limited in number and are mostly of the disc type.

Two fragmentary shell gorgets have been found on the surface of the primary mound in Mound F. Both have scalloped edges and one has definitely had a central design formed of the equal armed cross.

Metal complex. Metals are relatively rare and consist of, largely, unworked cubes of galena. Several rods, circular in cross section, ground from galena ore, have been found in the village site.

Copper objects are limited to three copper awls and two beads rolled from strips of sheet. Unmodified fragments of sheet copper are common in the refuse deposits.

Minerals complex. Specimens of all the minerals indigenous to the locality are found in the refuse. Cannel coal is extremely abundant in unmodified form. It perhaps was available locally, or was brought down

river by flood from the extensive river bed deposits at Cannelton, Indiana. Objects of cannel coal consist mainly of ear plugs and discs.

Pigments were manufactured by the aborigines from red and yellow ochres, specimens of which are found abundantly in the refuse deposits.

Spawls of quartz and fluorite were abundant. Objects of fluorite consist of spherical beads, elongate pendants and two effigy pendants made in the form of an owl and a turtle.

The most spectacular single object found to date was made of fluorite. It was the effigy of a man, seated in a position characteristic of such objects. The left leg was crossed in front of the body, with the left foot behind the right heel. The right leg was flexed vertically in front of the body with the right hand upon the right knee. This object weighed 11½ pounds and had an overall height of 8½ inches. It was found 1.6 feet below the truncate apex of Mound F, unaccompanied by other objects.

Textile complex. The trait involving the manufacture and use of textiles is limited to the impressions of textile types upon the surfaces of certain pottery sherds. This type runs the range of the textiles common to the Middle Mississippi cultural area and consists of plaiting, twining, open work, knotted netting and plaiting in cane.

These articles were used, theoretically at least, in the process of manufacture of large, unwieldy vessels and left their impressions impervious to destruction after the vessel was fired. A trait which is unique, to the writer's knowledge, has occurred at Angel Site. In many instances sherds have been found bearing the textile impression upon the inside surface, rather than the outside. These inside impressions occur not only on the large vessels of the "salt pan" type but on small, thin walled vessels as well. No explanation for this peculiarity can be offered at this time.

Pottery complex. Pottery trowels are abundant and have either a plain handle or a bifurcated handle, with the latter type predominant.

Ear plugs are found in two types, the most common being a pin-like object with an expanded spherical head. The other type is discoid in shape, sometimes having a concave edge.

Pottery discs, both perforated and unperforated, are found in large numbers. Generally, they have been made from sherds but, on occasion, specimens have been found which indicate that they were intentionally made in disc form.

Discoidals of pottery, identical with those of stone, are frequently found.

By far the greatest number of effigies found are the heads of birds and mammals, once forming the handles of wide mouthed bowls. Several species of mammal are represented but bird heads outnumber mammal in occurrence. The duck is a favorite among these objects.

Full bodied human effigies are found in a variety of forms and were manufactured as specimens rather than bowl handles.

A cache containing several hundred small clay pellets was found in the village excavation. These pellets probably had been made for inser-

tion in hollow head effigies to form rattles, three of which are represented in the collection.

Spherical beads of pottery are more common than are beads of stone, bone or shell but, at the same time, form only a small portion of the material complex.

Elongate, cylindrical pendants of pottery, either grooved or perforated for attachment or suspension, are found at all levels in the village exploration. Effigy pendants of pottery are predominantly made to represent the owl.

Pottery pipes are mainly of the elbow, bi-conoidal type. Two exceptions to this may be cited in describing two effigy pipes, both of which are fragmentary. One is of a kneeling human; the other is of a bird having a long bill and probably representing a crane.

Pottery rings are common; all are thin-walled, having a concave edge and were probably used as an ear adornment.

Spherical balls of pottery having no perforation are found in some numbers and probably should be considered as a part of a gaming complex, along with pottery discs, cut astragalus and discoidsals.

The vessel complex at the Angel Site is complete and satisfies the need of the Middle Mississippi culture pattern. A great variety and range exist, both in vessel size and shape. Wide mouthed bowls, jars and bottles are abundant. No entire vessel of the "salt pan" type has as yet been found but that this form was a part of the material complex of the site inhabitants is attested by the thousands of sherds representing this type of specimen.

Two effigy bottles of outstanding merit have been found to date. One is the effigy of a female in a kneeling position, holding a bowl before her in outstretched hands. The head had been broken off before the bottle was discarded and, unfortunately, has not been recovered. The hair braid extending down the back is modeled in relief, as are the shoulder blades, the waist line, toes and fingers. The skirt is delineated in relief and painted with black vertical stripes. The second bottle is the effigy of an owl, with all pertinent parts including the beak, the head tufts, wings and feet faithfully modeled. The entire exterior surface has been filmed with red ochre.

The most surprising single element of the explorations to date has been the abundance of painted ware. The design elements are varied, complex and pleasing. They consist primarily of design elements handled by the negative painting technique on the vessel surfaces, previous to firing and have had a film of red ochre placed over them after firing. In the finished product this technique provides the illusion of a polychrome ware, consisting of red and black design elements.

The four world quarter cross and sun symbol is the motif found most often. Many variations of this element occur.

Numerous examples of direct applications of color to the vessels' surface without negative treatment, as well as controlled application of color over negative designs are in the collections.

By far the greatest majority of painted sherds represent dishes or plates but examples of painted bottle sherds and bowl sherds are found in some numbers.

Trade Activity

Some examples of actual trade specimens are at hand but, at this writing, it would be premature to state definitely that certain objects had their origin in unrelated areas or from unrelated peoples. Several exotic ware types of pottery are found in limited numbers, both in the mound being worked and in the village site. As these wares can be duplicated on sites both up and down the river where the types form the dominant pottery trait, it might be inferred that the inhabitants of Angel Site were in direct personal contact with the inhabitants of those other culturally unrelated sites. With our present knowledge such an inference would be dangerous due to the fact that the wares in question should antedate by a considerable number of years the occupation of Angel Site. There may be an overlapping chronology involved, the solution of which remains for the future.

Several sherds, both rim and body, of sand tempered Lamar Complicated Stamp ware have been found at varying levels in the village. These sherds definitely represent trade wares.

Another example might be cited in the one grooved axe, the one platform pipe and the two fragmentary slate gorgets so far discovered. These objects do not normally fit into the Middle Mississippi pattern, either materially or chronologically. The assumption that these objects were trade pieces would also be dangerous at this time.