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WELCOME MOUND AND THE EFFIGY PIPES
OF THE ADENA PEOPLE

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The expansion of the Columbia-Southern Chemical Corporation's Natrium Plant near New Martinsville, West Virginia, required removing two Adena Indian burial mounds on their property. The first, known as "Natrium Mound" (46Mr-2), was carefully excavated in 1948 by Ralph S. Solecki (Solecki, 1953); the second, "Welcome Mound" (named after the community "Welcome," 46Mr-3), was excavated by me in 1957.

Appreciating the need to preserve a detailed record of the contents of such prehistoric burial sites, Mr. C. E. Wolf, Plant Manager, notified the West Virginia Archeological Society and, through it, the Smithsonian Institution of the impending program of expansion. In addition, the Columbia-Southern Chemical Corporation, a subsidiary of the Pittsburgh Plate Glass Company, in 1948 and again in 1957 provided laborers, heavy and light machinery, and tools. The Smithsonian Institution provided the archeologists.

Adena People

Adena burial mounds are common in the Ohio River Valley region. It was not, however, until 1901 that the first Adena mound was excavated for historical purposes by William C. Mills of the Ohio State Museum (Mills, 1902). This mound was on the estate of Thomas Worthington (Governor of Ohio, 1814-18) in Ross County, a mile northwest of Chillicothe, Ohio. Governor Worthington gave the name "Adena" (probably from the Hebrew "Adinah") to his acreage on the west side of the Scioto River. Presumably he meant to imply "nothing lacking" or, freely translated, "paradise." The name "Adena" was adopted by archeologists to refer to the prehistoric Indians who built such mounds.

The middle section of the Ohio River flows through narrow, steep-sided valleys with hills rising 600 to 700 feet above the river. Level areas occur at various bends in the river, known as bottoms, one such being Grave Creek where one of the highest mounds in the United States is located, the famous Grave Creek Mound in the center of Moundsville, West Virginia.

The relatively wide, level areas periodically flooded by the Ohio River served as ideal village sites for these prehistoric people. The environment consisted of a river well-stocked with fish and mollusks, and with plenty of fresh water; heavily wooded hills that even now support deer, bear, and many other meat-producing animals; and sites for garden plots that were annually enriched by flood waters. Such an environment was probably an important factor in the transition of a nomadic group to a semisedentary one.

These ecological factors probably enabled a gathering, gardening, and hunting people to plant, cultivate, and store vegetables. They probably also depended on animals, fish, berries, and wild plants to supplement their diet. The large mounds that they built over the bodies of their dead are evidence that they remained in one place for a considerable time. It is not known how long it took them to build Welcome, Natrium, Cresap, or Grave Creek Mounds, which are all within a few miles of each other, for we do not know how many people worked on these mounds or what kinds of implements they used.

The prevalence of Adena mounds along the Ohio River and its tributaries in Kentucky, Ohio, West Virginia, Pennsylvania, and Maryland suggests that this area (fig. 1) became one of the favored locations of these people between 800 B.C. and A.D. 800. Here many family groups apparently found an environment conducive to settle in and built a compact social organization. The mounds that they built probably honored certain deceased members of their tribe and served as protection for their remains.

The bodies were usually interred extended on their backs with personal belongings and ceremonial and political paraphernalia, and were surrounded by log and bark structures. The ceremonial objects buried with the deceased individual were probably regarded as contributing to his welfare in after life.

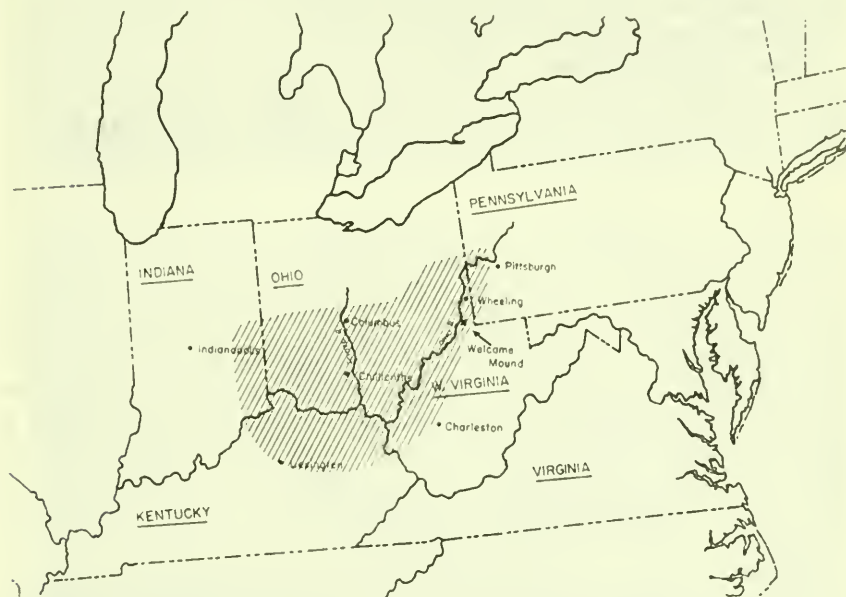


FIGURE 1—Map showing concentration of Adena sites in the Ohio River Valley region.

Welcome Mound

Erecting a tumulus as large as Welcome Mound was a considerable undertaking for these people. It measured about 110 feet in diameter and 14 feet at the highest point (plate 1). The hundreds of tons of dirt were composed of both the thin mantle of topsoil and surrounding humus and a loose gravelly soil, interspersed with water-worn pebbles ranging in size from a marble to elliptical biconvex pebbles 4 to 5 inches across. The composition was comparable to that found in the Natrium Mound, a mile to the south (Solecki, 1953, pp. 327, 382, 390). Such a mixture made it difficult for us to dig with shovels and trowels.

In contrast to some of the other large Adena mounds which contained the remains of many more bodies (Bache and Satterthwaite,

1930; Greenman, 1932; Webb and Snow, 1945; and Webb and Baby, 1957), Welcome Mound contained only three adult human skeletons. Two of the bodies were placed on the base near center. There were no pits or clay-lined tombs beneath the original surface of the ground as were found in the other mounds. The stratum of glacial gravels underlying the base probably discouraged such an operation by people limited to primitive tools of wood or stone. The badly decomposed skeletons were surrounded with the usual channels or molds, caused by decayed logs lying in various directions. Layers of bark and the residue of perishable things lay both beneath and over the skeletons.

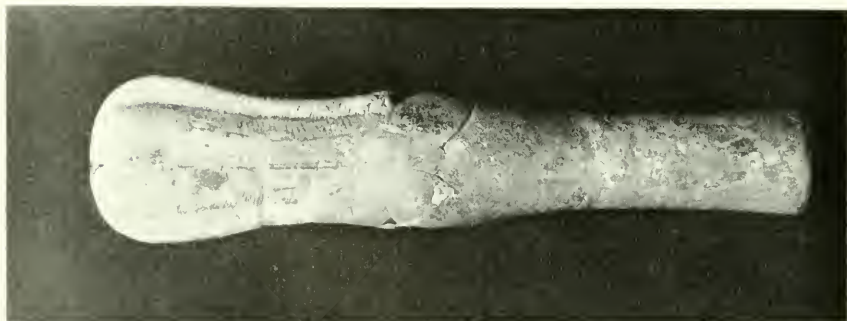
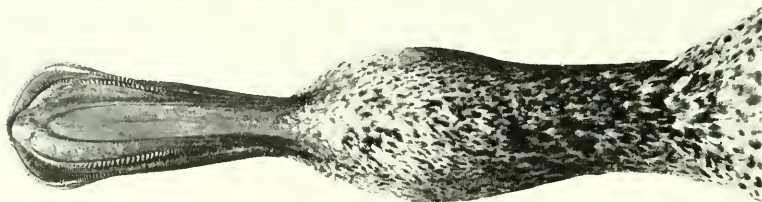
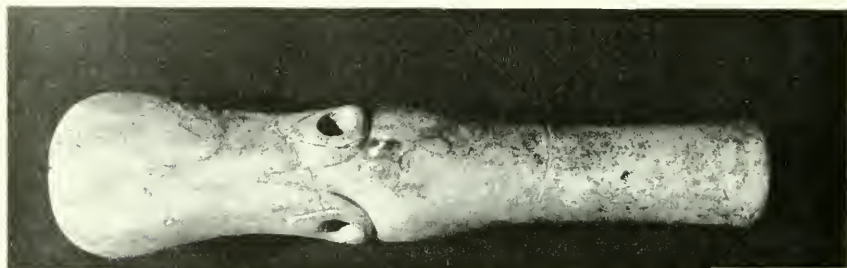
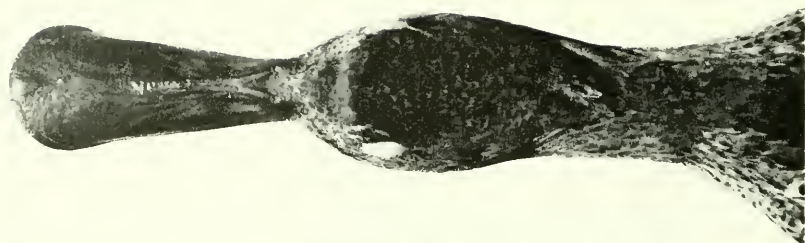
A mass of thick, coarse, grit-tempered potsherds and a handful of fresh-water mollusk shells were found on the same level within a few feet of the skeletons. After much effort to restore these hundreds of sherds, I was able to construct a large (over 1-foot high) barrel-shaped vessel with no neck or constriction and with a flat undecorated rim. The rim is $\frac{5}{16}$ inch thick, and the wall thickens down the side to $\frac{5}{8}$ inch near the rounded base. The outside surface, especially near the top, gives the appearance of smoothed-out cord marks. In color, it varies from a dark brownish grey at the top, through a pinkish tinge, to an off-white base. It is tempered with relatively large and coarse water-worn gravelly pebbles. It is not as heavy and crude as earlier Adena Fayette Thick pottery, but is in no way comparable to the decorated pottery of the contemporaneous Hopewell Indians, whose burial mounds are in the same general area. I am inclined to place the pottery somewhere between Early and Middle Adena periods.

In the mouth of skeleton No. 3 was found a large tooth (plate 1), subsequently identified as the canine tooth of the mountain lion, or cougar, *Felis concolor*. The tooth in this position would seem to be of little significance, but this finding must be correlated with a previous discovery. W. S. Webb and R. S. Baby in 1949 (Webb and Baby, 1957, pp. 61-71) found the front portion of the upper jaw of a wolf, cut in the form of a spatula, associated with a human skull in the Ayres Mound near New Liberty, Kentucky. This jaw, together with the six other known associations of bear, cougar, and wolf teeth, establishes an important ceremonial trait among these Adena people. Thanks to the meticulous work of Webb and Baby, we now know that the Adena people had men who served their society in a capacity comparable to that of a shaman, medicine man, or witch doctor.

The mountain lion tooth in the mouth of skeleton No. 3 therefore supports the belief that this skeleton is the remains of an important religious leader. He was probably buried in a costume that included an animal mask. If the bark and other discolorations surrounding



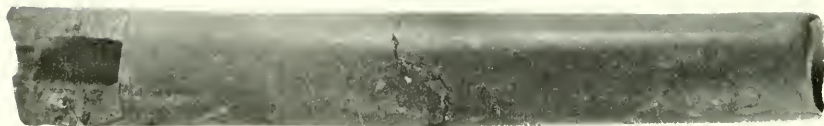
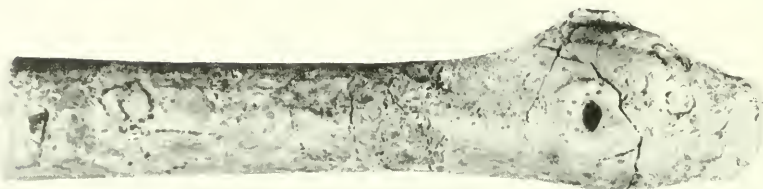
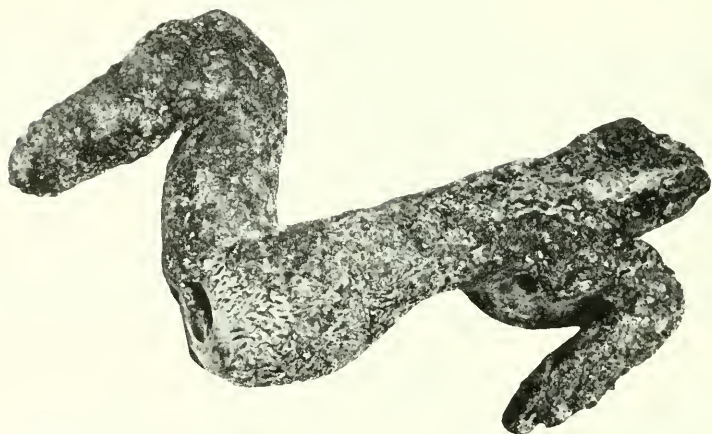
Welcome Mound, remains of skeleton No. 1 and the duck effigy pipe in situ, and remains of skeleton No. 3 and the canine tooth of a mountain lion.



The duck effigy pipe from Welcome Mound compared with the bill, head, and neck of a shoveler duck.



Human effigy pipe from the Adena Mound.



Other Adena pipes: Duck effigy from Englewood Mound, aquatic bird effigy and wolf effigy from Saylor Park Mound, and the more common plain pipe.

this skeleton could be identified, we would have more specific evidence of the paraphernalia and garments—probably the skin of a cougar—worn by this intermediary between his people and the spirit world. Such an individual would be sufficiently important to justify the arduous task of constructing a 14-foot high mound.

Granulated pieces of charcoal found at the base of the mound and in association with burials 2 and 3 were tested for Carbon-14 by Michigan-Memorial Phoenix Project No. 6. Dr. James B. Griffin of the University of Michigan has relayed the results of sample M-903 as 2300 plus or minus 200 years before the present, or about 341 B.C.

Effigy Pipes

The most unusual object recovered during the excavation of Welcome Mound was the straight-tubular, duck-effigy pipe (USNM 417000). One can readily see (plate 2) that the prehistoric sculptor responsible for carving the duck effigy was gifted, as he reproduced almost to scale the head, neck, and bill of a shoveler duck, *Spatula clypeata* (Linnaeus). In using Ohio limestone, he had the advantage of its softness when freshly dug. After it is exposed to the air, it becomes hard and brittle. This peculiarity was noticed when I cleaned the dirt from around the pipe. The bristles of the whisk broom made slight scratches. I had to use a camel's hair brush instead. Several days later the limestone was much harder.

The pipe was found 5 inches from the right knee of skeleton No. 1 (plate 1), 6 feet beneath the crest of the mound and 8 feet directly above burial No. 3 in square N18-W1. The body had been buried in a north-south direction with feet pointing to the north. The bones being articulated indicated that the body was buried in the flesh on its back. It was surrounded by a greenish-grey oily clay, which was enclosed with heavy bark. The acidity of these bark coverings (oak or walnut) seems to have given the bones a reddish cast. On three sides were imprints or molds 18 inches in diameter left by the decomposed logs. The bones of the skeleton are heavy and are judged to be those of a middle-aged male.

The pipe measures $6\frac{1}{2}$ inches in length. The tubular end is 1 inch in diameter on the outside, and the diameter of the drilled hole is $\frac{1}{2}$ inch. The widest part of the bill is $1\frac{1}{2}$ inches. Near the head back of the eyes, it is $1\frac{1}{6}$ inches wide. The narrowest part of the bill, directly in front of the eyes is $1\frac{1}{32}$ inches wide. The $\frac{3}{16}$ inch opening in the bill or mouthpiece is elliptical. The eye sockets are $\frac{3}{8}$ inch in diameter and are $2\frac{1}{2}$ inches from the end of the bill. The underside of the bill clearly suggests the lamellae characteristic of shoveler ducks (plate 2).

The pipe is thus basically tubular in shape and gracefully carved to represent the neck, head, and bill of a shoveler duck. The two countersunk holes, representing eye sockets, could have been filled with a perishable substance to represent the pupils. The relatively flat, expanded bill served as the mouthpiece. The circular bore runs to within $\frac{1}{2}$ inch from the mouthpiece, where the hole is reduced from $\frac{5}{8}$ inch to an elliptical opening of $\frac{3}{16}$ inch.

Straight tubular effigy pipes have also been found in other Adena mounds. The most famous one is the human effigy pipe, found by Mills in 1901 in the Adena Mound on Governor Worthington's estate near Chillicothe, Ohio. This pipe is reproduced here (plate 3) through the kindness of Raymond S. Baby of the Ohio State Museum. It was carved from multicolored Ohio pipestone also in the form of a straight tube and represents the body of an achondroplastic (chondrodystrophic) dwarf, as is apparent from the short heavy-set muscular torso, stubby arms and legs, enlarged head, and swollen (goiter) neck. This pipe has been regarded by both archeologists and artists as one of the sculptured masterpieces of American Art. Until now, it was the only effigy pipe ever described from an Adena Mound.

Soon after the Welcome Mound pipe was discovered, a cast of a similar duck effigy pipe was located in the Division of Archeology of the Ohio State Museum. The original, now in the Dayton Museum of Natural History, was reported found in loose dirt while the Englewood Mound, near Dayton, Ohio, was being levelled by a bull-dozer during the building of a dam in the early 1930's. The pipe is illustrated here (plate 4) by permission of Mr. E. J. Koestner, Director of the Dayton Museum. The length is $6\frac{1}{4}$ inches, the diameter of the neck is $\frac{3}{8}$ inch, and the widest part of the bill is $1\frac{1}{4}$ inches. The length from the end of the neck to the center of the eye socket is exactly 4 inches, the same length as the Welcome Mound pipe.

Two effigy pipes were uncovered in the excavation of a mound in Saylor Park, Cincinnati, Ohio, by the Cincinnati Museum of Natural History. One is a well-proportioned clay effigy of an aquatic bird and was found in association with one of the burials. The director of the Cincinnati Museum of Natural History, Mr. Ralph Dury, very kindly sent me photographs of this pipe, as well as of another that represents the head of a wolf. These pipes were excavated under the supervision of Dr. James Kellar and S. Frederick Starr and are reproduced here (plate 4) by permission of Mr. Dury. On the basis of these and other artifacts recovered, we must assume that Saylor Park Mound was also built over the interred bodies of Adena people.

Since straight-tubular effigy pipes were made exclusively by the Adena, they are a diagnostic culture trait of these people. The carving of objects as artistic as these pipes certainly represents an

artistic talent beyond that of an ordinary member of a society. To what extent the making of pipes indicates specialized professions, however, is difficult to determine.

The duck effigy pipe from Welcome Mound appears to be related in some way to the person buried beside it and to a mortuary custom of the Adena people. Moreover, it may indicate some religious significance associated with a shoveler duck. The same reverence postulated here for the shoveler duck may be applied to the wolf and unidentified aquatic-bird effigy pipes from Saylor Mound.

The human effigy pipe from Adena Mound could well represent a particular individual. A person possessing the physical and pathological characteristics apparent in the effigy was likely regarded as unique and thereby deified; actual dwarf skeletons have been recovered in Adena mounds.

Among numerous primitive people, the smoking of tobacco or some herb was regarded as sacred or an important part of a ceremonial function. As we know from early European contacts with North American Indians, the smoking of a peace pipe attended all important political as well as religious or ceremonial functions. Possibly these effigy pipes and the more common plain pipe (plate 4) found in the mounds of the Adena represent the origin of such a ceremony. Our only evidence rests with similar forms used by historic Indians and reported by early Spanish, French, and English explorers and missionaries.

Several monographs have been published on this topic, e.g., G. A. West (1934) and H. C. Shetrone (1941). These men not only illustrate various other kinds of pipes, but quote from hundreds of sources describing the variety of uses that were made of the many forms of *Nicotiana*. When we consider the impact that tobacco had upon the countries of the world after 1492, it is understandable that the probable original users of this herb buried pipes—especially such well carved pipes—as offerings to their dead.

Summary

The burial methods, the type of pottery and restored vessel, the date from Carbon-14 tests, the effigy pipe, and the association of an animal tooth in the mouth cavity are sufficient evidence to establish Welcome Mound as an Adena burial site. The wearing of an animal mask indicates that such a person could have served as a shaman and as such would justify the building of Welcome Mound. The effigy pipes indicate a possible religious association between the prehistoric Adena and aquatic birds, animals, and dwarfs, while the artistry shows an advance over the common straight tubes of the earlier, archaic people and those of the Adena.

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