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THE EASTON SITE

OKLAHOMA HIGHWAY ARCHAEOLOGICAL SURVEY
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1975

OKLAHOMA DEPARTMENT OF HIGHWAYS

PLANNING DIVISION

ARCHAEOLOGY AT THE EASTON SITE (Lf-213), LeFlore County, Oklahoma

by

Jack L. Hofman

OKLAHOMA HIGHWAY ARCHAEOLOGICAL SURVEY
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1979

STATE OF OKLAHOMA
DEPARTMENT OF
HIGHWAYS
200 N. E. 21st Street
Oklahoma City, Oklahoma 73105

November 12, 1975

Mr. Monty C. Murphy
Planning Engineer
Oklahoma Department of Highways
200 N. E. 21st Street
Oklahoma City, Oklahoma 73105

Dear Mr. Murphy:

The Oklahoma Highway Archaeological Survey has completed "Papers in Highway Archaeology, Number 1". This paper is the first in a series of papers designed to disseminate the archaeological information collected by the survey.

This paper relates to the Easton Site located in LeFlore County. Easton Site was salvaged in conjunction with construction of State Highway 112. Easton Site represents multicomponent occupation consisting of Archaic and Caddoan peoples.

Sincerely,

David R. Lopez
Chief Highway Archaeologist

STATE HIGHWAY COMMISSION
CHAIRMAN—J. C. KENNEDY, VICE CHAIRMAN—WILLIAM R. NASH, SECRETARY—W. E. ALLFORD, MEMBERS—JAMES H. GUNGOLL, MRS. ROBERT L. PARKER, MARTIN H. CLARK, GLENN C. SOUTHALL, STANTON L. YOUNG—DIRECTOR—R. A. WARD
AN EQUAL OPPORTUNITY EMPLOYER

**** ERRATA

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The Oklahoma Archaeological Survey provided facilities and space necessary for the preparation of this report and the Stovall Museum made available its dark room facilities. Sheila Bobalik, Larry Neal and Roger Saunders of the Archaeological Survey deserve special thanks. Sheila typed portions of the draft, typed all the tables from my rough copies, and did all of the photographic work. Sheila's patience and efforts made it possible to complete the report on Easton much more promptly than would have otherwise been possible. Larry and Roger provided helpful comments in resolving certain problems encountered during the analysis and were always willing to help in the identification of lithic materials.

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ABSTRACT

The Easton site, Lf-213, was excavated in April, 1974 by the Oklahoma Highway Archaeological Survey because the site was endangered by the proposed realignment of State Highway 112. The Easton site is located on a tributary stream of the Poteau River and served as a temporary camp site for both Archaic and Caddoan peoples. Analyses of the cultural material from Easton were directed toward determining the nature of the Archaic and Caddoan occupational phases represented at the site and at determining the time of these occupational phases in relation to other sites in the region. The primary utilization of the Easton site was by Archaic peoples, probably some time before 2000 B.C. During the Archaic occupational phase, the Easton site served repeatedly as a hunting station where peoples were involved in flint working, maintenance of hunting equipment, and probably preliminary butchering and game processing. Caddoan occupation of the Easton site was more limited and is believed to have occurred around A.D. 1300-1350. Caddoan people used Easton as a locus from which they directed various, non-horticultural, exploitative activities.

ARCHAEOLOGY AT THE EASTON SITE (Lf-213), LeFLORE COUNTY, OKLAHOMA

Jack L. Hofman

I

GENERAL INTRODUCTION AND BACKGROUND

The development of extensive communication and transportation systems in America today is an ongoing and expanding process. Such development is necessary in order that our society can continue to function as a broadly integrated and widely interacting system. But, in our concern for progress, it is easy to lose touch with the past. To most fully appreciate and understand the modern world, however, we need the perspective of the past. Prehistoric peoples lived in Oklahoma for many thousands of years under widely varying conditions and with varied success. We can learn from the study of these past peoples.

Studying the past is in one sense a dilemma, for it is hampered by our very progress.

> "Detailed studies conducted in a number of states indicate that within the next 25 years the vast majority of our archaeological resources will have been destroyed. A few sites will remain, often badly altered, but not enough to permit adequate assessment or reconstruction of the past."

> "If appropriate action is not taken now, we (and all future generations) will have lost our foundation in the past. Those of us alive today bear sole and full responsibility for preserving this information about the past. Our children cannot study or benefit from what we fail to preserve for them."

"Archaeological resources are nonrenewable. You can't plant or grow another archaeological site." (Committee on Public Understanding of Archaeology, Society for American Archaeology)

"Oklahoma is losing those irreplaceable locations occupied by its prehistoric people. The construction of reservoirs and highways, industrialization, urban expansion, land clearing, and untrained digging for relics yearly destroys sources of information. Most of this destruction occurs before trained archaeologists have a chance to see and evaluate the sites or even salvage data from the more significant ones. The locations of Oklahoma's prehistoric people are a unique natural resource of the state. They merit better protection, preservation, and study. We can learn from these people. They lived here for thousands of years. Will we?" (Wyckoff 1972:23)

These statements are provided because they illustrate what this report is about. The Easton site was a location of importance to certain prehistoric Oklahomans. Easton was, however, recently endangered by the new alignment of State Highway 112 and would have been completely destroyed had it not been for the efforts and cooperation of the Oklahoma Department of Highways. Archaeological salvage excavation was carried out at the Easton site by archaeologists of the Oklahoma Highway Archaeological Survey prior to site destruction. Thus, a portion of Oklahoma's prehistoric heritage was preserved which otherwise would have been lost to all.

This report is concerned with the Archaeological investigation of the Easton site and a study of the prehistoric remains recovered from the site. The report is divided into three general parts, of which the first will provide information about the Easton salvage project and the Easton site area in terms of its archaeology and natural setting. The second part is a consideration of the actual investigations at Easton and the cultural materials which were recovered. The third and final part provides an analysis of the recovered material.

The Oklahoma Highway Archaeological Survey

The Oklahoma Highway Archaeological Survey was established in 1972 through the efforts of the Oklahoma Archaeological Survey and the Oklahoma Department of Highways. The objectives of the Highway Archaeological Salvage Program are to provide an inventory evaluation and recommendation for preservation of archaeological resources in and along proposed highway projects in Oklahoma. It is also the task of the Oklahoma Highway Archaeological Survey to undertake salvage or direct preservation of archaeological resources endangered by pending highway construction. An effort is made to determine the cultural identity of the people who occupied the studied archaeological sites and to ascertain the activities in which they were engaged.

The majority of archaeological sites located during survey of proposed highway corridors are not excavated. Some sites are simply insignificant in terms of the contribution their study would make to understanding the area's archaeology. Sites of more potential importance can often be preserved by slight realignment of the highway corridor. It is the policy of the Oklahoma Department of Highways to reroute around sites of potential importance when feasible. When projects cannot be realigned, however, salvage excavation is sometimes necessary. A problem does exist when potentially significant sites are located during surface survey. There is no legal means for testing such sites prior to purchase of the land by the Highway Department. In certain situations, it is impossible to determine the actual extent, depth, or potential of a site without undertaking minor test excavations. This can result in circumstances where an archaeological site can be evaluated only after purchase of the highway right-of-way.

In the case of the Easton site, the right-of-way had been purchased before the site could be properly evaluated by test excavations. Obviously, this situation could have caused further delays had the site required extensive excavations prior to road construction. Fortunately, however, the deposit of cultural material at Easton was thin and somewhat limited, and there was no substantial delay of road construction due to archaeological work.

The Easton Site Salvage Project

The Easton site was originally reported by David R. Lopez on February 5, 1974 during an intensive archaeological field study of the proposed new alignment of State Highway 112. Scattered cultural debris consisting of dart point fragments, a scraper, flakes and other debitage were recovered from rodent burrows on the site. The site, which covers less than an acre, was located on a terrace remnant of James Fork Creek which supported a lush growth of vegetation. Since little could be determined about the nature or significance of the site based on this limited surface collection, and because the site was within the new right-of-way corridors of SH 112, it was recommended that extensive exploratory testing be conducted in order that further evaluation of the site's potential would be possible.

Testing was finally made possible in April of 1974 after the site area had been purchased by the Highway Department. Five days were spent at the site, from April 2 to April 6, during which time brush was cleared from an area of the site, a grid system of five-foot squares was laid out and 23 of these squares were excavated to varying depths. Figure 1 illustrates the Easton site before and during excavation and after destruction by large earth moving machinery. It is unfortunate that many sites such as Easton are destroyed through various causes without any previous archaeological investigation.

SETTING

The Easton site is located about two miles northeast of Cameron, Oklahoma, on the south side of James Fork Creek. The site rests on an elongated knoll which covers several acres. The James Fork flows west and enters the Poteau River about seven miles from the site. Vegetative cover consists of abundant grasses, oak and sycamore trees, and a galleria forest lining the channel of James Fork. The site is within the area designated by Bruner as the Oak-hickory savannah (Bruner 1931).

At present, the region has a somewhat humid, warm-temperate, continental climate (Knobel, Boatright and Boatright 1931). Summers are hot though winters are not usually severe with only short periods of intensive cold. Temperatures

a

b

c

Figure 1. Three views of the Easton Site: a-Prior to Excavation; b-Excavation in Progress; c-After Destruction by Earth Moving Machinery.

range from over 100° F. to occasional readings of -10°. The average annual temperature is approximately 63° F. with the coolest months being December and January. July and August temperatures, on the other hand, average over 80° F. (Shingleton 1971).

Precipitation occurs primarily during the growing season with May being the wettest month (Davis 1960; Knobel, Boatright and Boatright 1931). The average annual precipitation is about 42 inches while the evapotranspiration potential is 36 inches (Gray and Galloway 1951). Moisture occurs principally as rain showers with snow, sleet and hail providing minimal amounts. The growing season extends from April to October with an average of some 215 frost-free days. The first killing frost usually occurs around the first of November with the last frost commonly in late March (Knobel, Boatright and Boatright 1931).

In the James Creek Valley are light-colored, acid sandy to loamy soils underlain by heavier (clayey) subsoils. Cotton grows well here and is the main staple crop in the area, although commercial vegetables and potatoes are also grown. Around the turn of this century corn was extensively grown in the area for use as livestock feed (Knobel, Boatright and Boatright 1931; Gray and Galloway 1959).

Physiographically, the Easton site lies within Curtis and Ham's (1972) McAlester Marginal Belt which is a twenty to twenty-five mile wide strip characterized by sandstone capped hills and broad shale valleys. This province forms the northern and western fringe of the Ouachita Mountains (Curtis and Ham 1972). The sandstone is of Pennsylvanian age and its resistant nature has produced local relief as much as 1700 feet above the hilly shale valleys.

The region has bountiful plant and animal resources which were beneficial to the prehistoric occupants of the Easton site. Hickory, pecan, walnut, mulberry, hackberry and persimmon trees produce edible nuts and fruits which were probably exploited. A number of smaller plants which produce edible seeds, berries, roots and tubers also grow throughout the area. Wildlife is common and includes a large variety of mammals, amphibians, reptiles, fish and birds. Deer, coyote, otter, mink, beaver, raccoon, opposum, squirrel, rabbit, gopher and woodrat are among the mammal resources which would have been available.

THE AREA'S ARCHAEOLOGICAL FRAMEWORK

That portion of eastern Oklahoma drained by the Arkansas River and its tributaries has produced evidence of aboriginal activities extending back to at least 9,500 years ago (Wyckoff 1964). During this length of time, fluctuations in the climate occurred and shifts in the ecological setting of the area are evidenced (Baerreis and Bryson 1965, 1965b). Developments and changes in the lives of the prehistoric people of the area were made in response to and in accordance with a number of influential factors, including environmental ones. On a regional scale, these cultural developments and changes are reflected in the archaeological record by changes in types, kinds and frequencies of artifacts and features. These indicators of the past index the changing subsistence strategies of the people who used them. From this form of evidence, archaeologists have proposed a number of stages which identify past levels of technological development, means of subsistence of livelihood, and which are believed to indicate various degrees of socio-cultural integration of prehistoric populations.

Radiocarbon dates are available from certain sites representing these stages which provide information on their chronological periods in eastern Oklahoma. The following cultural framework is essentially like those previously used in the area, and suggests the approximate time periods associated with the cultural stages (see Bell 1963; Wyckoff 1970).

Archaic	8000 B.C.-500 B.C.
Woodland	500 B.C.-A.D. 700
Caddoan	A.D. 700-1600
Early Historic	A.D. 1700-1830

The Archaic is the longest of these stages and is generally divided into three periods. Considered as a whole, however, the Archaic was apparently characterized by small bands of hunters and foragers who wandered over restricted areas collecting wild plant food and hunting small game. Deer and smaller mammals provided the major meat source and were hunted by means of atlatl propelled darts which were tipped with a variety of projectile point styles. It is apparent from available evidence that these Archaic peoples were well suited to what must have been a challenging

but largely successful life style. Certainly, they had an extensive knowledge of local vegetable food and animal resources which were probably exploited on a seasonal basis, perhaps with band camps situated according to areas of scheduled resource exploitation. Small impermanent camps seem characteristic of Archaic settlement, and some sites were apparently revisited at intervals for hundreds of years. More specialized or limited activity sites which served as hunting or flint working stations are also common.

During the Early Archaic, projectile points are characterized by generally lanceolate forms of Dalton, Meserve, Agate Basin and other types as well as side notched point types such as Big Sandy (Wyckoff 1964). Tools associated with cutting, scraping and chopping activities are also quite common.

Following this early period, the Archaic sites produce a proliferation of projectile point styles which show much variation on a general stemmed and notched form. The latest Archaic sites are distinguished by a majority of contracting stem dart points with lesser numbers of notched forms also present (Bell 1953; Burton and Neal 1970; Burton 1971). Stemmed hoes, double bitted axes, grinding stones or mullers and cup stones are also found in late Archaic assemblages (Wyckoff 1967:153; Wyckoff and Barr 1967a).

Woodland, a post Archaic pre-Caddoan culture, is not well understood in the area. It is during Woodland that cultigens probably began to figure importantly into the subsistence strategy of people in the area. Also, the introduction and first widespread usage of pottery in eastern Oklahoma was during Woodland. The primary subsistence of Woodland peoples was still based on hunting and gathering, however, as during the Archaic. Woodland sites are reported from Muskogee and Mayes Counties (Schneider 1967; Wyckoff and Barr 1964). These sites are represented by burned rock mounds dated at around A.D. 500 (Wyckoff 1967: 154). The Wendtland site in Muskogee County (Schneider 1967; Wyckoff 1967) may best relate to the Woodland of eastern Oklahoma. A rather intensive degree of plant management is indicated by the sample of siltstone hoes from Wendtland. Other artifacts from the site include dart and arrowpoints of various styles, grinding stones and thick, plain surfaced, grit and clay tempered pottery (Schneider 1967). There is no direct evidence of domesticated plants from any Woodland site in eastern Oklahoma at present.

Although no absolute dates are available, the last phase of the Fourche Maline focus may appropriately be considered as Woodland because of its material culture and probable chronological position. Fourche Maline sites, first recognized in the Lake Wister area of LeFlore County, are characterized by thick, dark midden deposits which contain flexed burials, a variety of arrowpoint and dart point styles (predominantly contracting stem dart points and corner notched arrowpoints), bone artifacts (bodkins, whistles, awls, pendants), ground stone items (gorgets, boatstones, grinding stones), chipped stone axes and hoes, and plain, thick, clay tempered pottery (Bell and Baerreis 1951; Bell 1953; Wyckoff 1974). The earliest levels of Fourche Maline sites apparently relate to the Archaic while some of the late Fourche Maline traits continue to be common during early Caddoan times (Bell 1953, 1972: 262; Wyckoff 1974: 50-51).

To the north of Lf-213 (Easton) evidence of Woodland occupation is well represented in Delaware County. The Cooper site is the best known of several sites which have produced dentate and rocker stamped ceramics comparable to Hopewellean materials of the Kansas City area (Baerreis 1939a, 1939b, 1953). Clay figurines from the Cooper site are also similar to specimens from certain Hopewell sites (Baerreis 1940). Large notched projectile points, high keeled scrapers and shaped grinding stones were common at Cooper (Baerreis 1939b: 5).

The Caddoan stage can be divided into the Gibson (early Caddoan) and Fulton (late Caddoan) aspects for purposes of this review. It should be noted, however, that a more refined five-period sequence of Caddoan culture has been proposed and initiated for the area (Davis 1970; Wyckoff 1974). The Gibson aspect is most widely known by the Spiro site in LeFlore County, an extensive and elaborate Caddoan ceremonial center in the Arkansas River valley of Oklahoma. The degree of cultural development evidenced at Spiro between A.D. 1200 and 1400-1450 represents the prehistoric 'cultural climax' of the area (Bell 1972; Wyckoff 1974). The Harlan site in Cherokee County (Bell 1972) is the best documented of the Caddoan ceremonial centers and has produced evidence of Gibson aspect activity dating back to A.D. 700. The major period of ceremonial or religious activity at Harlan dates between A.D. 900 and 1200, starting earlier than, but overlapping with Spiro (Bell 1972: 260-61). Other Gibson ceremonial mound centers include the Norman site in Wagoner

County (Finkelstein 1940), the Brackett site in Cherokee County (Howard 1940; Bareis 1955), the Eufaula site in McIntosh County (Orr 1942), and the Hughes site in Muskogee County (Bell 1974).

Village sites of the early Caddoan are also known and are the habitation sites of the general population that supported the Gibson aspect ceremonial centers. These villages lack the proliferation of artisan goods which characterize the ceremonial centers, but house locations, storage pits, and other cultural features are found. Artifacts of a utilitarian nature are plentiful and include Williams Plains pottery (like that found in the Fourche Maline and Woodland), a number of engraved and incised decorated wares (e.g., Spiro Engraved, Canton Incised, Crocket Curvilinear, Sanders Engraved), and shell tempered Woodward Plain. Stone artifacts include some contracting stemmed dart points, various corner notched arrowpoints, chipped stone hoes, ground stone celts, manos, grinding basins, and so forth (Wyckoff 1974). Houses are square structures with an extended entryway usually to the east. They typically had four interior support posts and were of wattle and daub construction with wall posts and thatched roofs (Bell and Baerreis 1951: 37; Bell 1972; Wyckoff 1974). Reported Gibson village components include the Littlefield (Orr 1946), Horton (Wyckoff 1970; Schaeffer 1958), Morris (Bell and Fraser 1952; Bell and Dale 1953), Bowman (Orr 1946), Cookson (Israel 1968), and Cat Smith (Wyckoff and Barr 1967) sites.

Late Caddoan or Fulton aspect on the Arkansas is demarked by a sharp decrease in involvement with the Southeastern Ceremonial Complex (see Waring and Holder 1945), an end to mound construction (Brown 1966: 11-13) and an influx of material traits characteristic of the Southern Plains (Wyckoff 1970: 149-52). Although these major changes in Caddoan culture have been documented for the period between A.D. 1400 and 1500 (Bell 1968) Wyckoff 1970), their explanation remains as one of the major problems in Caddoan area research. At present, the most widely accepted hypothesis concerning reasons behind this culture change rests on environmental data. There is evidence suggesting a climatic shift from an abundant summer rainfall pattern to a drier growing season less favorable to horticulture at about A.D. 1450 (Baerreis and Bryson 1965: 216-17). Such an environmental fluctuation may well have resulted in a decreased dependability on horticultural endeavors and eventually led to a breakdown

of political and religious institutions during early Fulton times (Baerreis and Bryson 1965b: 72-74; Wyckoff 1970: 149-50; Burton 1971: 93-94).

There is considerable evidence of contact between Fulton aspect peoples and those of the Southern Plains (Wyckoff 1970, 1974; Burton 1971; Lopez 1973: 115-16). This increased interaction may well reflect a shift in subsistence strategy of these late Caddoan people. A shift which involved increasing utilization of the resources of the Plains environment, particularly bison, is certainly suggested. Sites with Fulton aspect components which have been reported from the Arkansas River valley include Moore (Orr 1946), Tyler (Burton, Bastian, and Prewitt 1969), Sheffield (Prewitt and Wood 1969), Tylor-Rose (Cartledge 1970), Harvey (Burton 1971), and Wybark sites (Lopez 1973).

Identification of the late prehistoric and protohistoric peoples of the Arkansas River valley of eastern Oklahoma as Caddo remains to be confirmed. Although such an assignment seems plausible, the absence of historical documentation of the area's population in the 16th and 17th centuries makes this problem of identification a difficult one. Archaeological work on historic sites in the area include studies of 19th century trading post locations (Wyckoff and Barr 1968; Bauth 1970). Until more work has been completed on protohistoric and early historic sites in the area, a better understanding of Fulton aspect relationships to historic peoples will not be possible.

II

THE EXCAVATION AND RECOVERED MATERIAL

Excavation, Stratigraphy and Soil

Excavation at the Easton site was carried out over a five day period, from April 2 until April 6, in 1974. Prior to staking out a grid system of 5' x 5' squares, the site area was tested with post-hole diggers and core auger to determine the areal extent and concentration of cultural deposits. A datum was established by driving a ten inch spike in a large tree located just outside the highway right-of-way. It is in the southwest portion of the site about 25 feet south of square N1-W39 (Figure 2). Horizontal and vertical measures at the site were based on the datum, to which an arbitrary elevation of 100 feet was assigned. Two zero coordinates formed east-west and north-south base lines from which the grid system was established. The center line of the new SH 112 alignment served as the north-south coordinate and the east-west coordinate was at a 90° angle to the center line. The 0-0 point (where the two zero coordinates intersect) is the centerline point number 978 of the SH 112 alignment.

The grid system of 5' x 5' squares was imposed on an area to the west of the 0-0 coordinate. All squares were designated by their northeast stake. A square with a northeast stake 25 feet north and 10 feet west of 0-0 would be assigned the number N5-W2, indicating that it was five squares north and 2 squares west of the 0-0 square. The entire site was mapped using an alidade and plane table which was situated in square N5-W24.

Because observable stratigraphy was lacking, based on core auger and post hole tests, excavation proceeded in four inch levels to enable fairly tight vertical control. The site area had previously been subjected to horse and plow agriculture early in this century which caused some horizontal and vertical disturbance. Because of this, the first level (0-4") of every square was excavated as a unit, but subsequent levels were removed in quarters (2.5 x 2.5 foot squares) in order to tighten horizontal control. No cultural features were encountered during excavation at the site. There were apparently no rock concentrations, pits, or hearths in the excavated area.

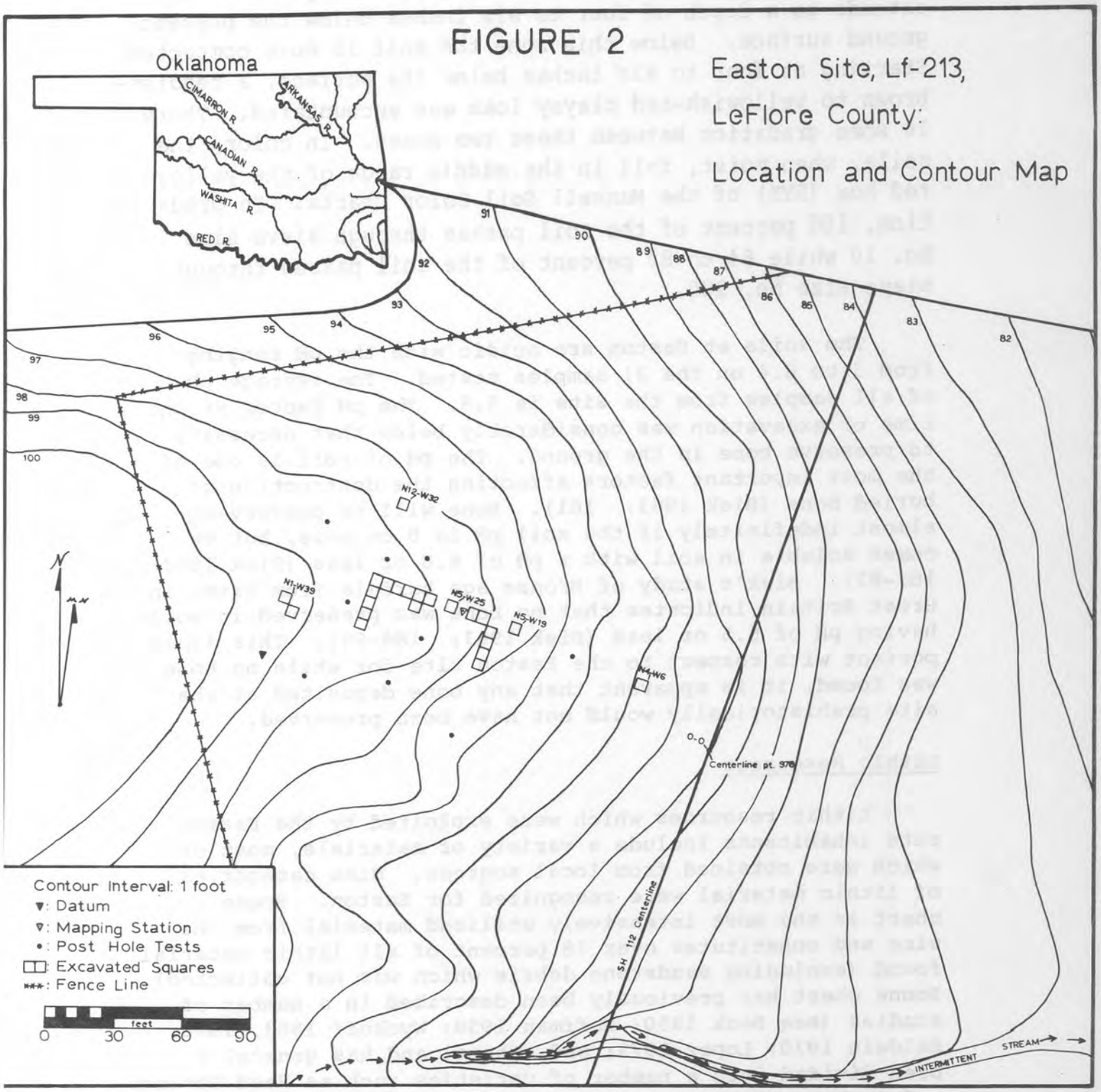
FIGURE 2
Easton Site, Lf-213,
LeFlore County:
Location and Contour Map
Oklahoma
CIMARRON R.
ARKANSAS R.
CANADIAN R.
WASHITA R.
RED R.
N12-W32
N1-W39
N5-W25
N5-W19
N4-W6
Centerline pt. 378
SH 112 Centerline
INTERMITTENT STREAM
Contour Interval: 1 foot
▼: Datum
▽: Mapping Station
•: Post Hole Tests
Excavated Squares
Fence Line
feet
0 30 60 90

Stratigraphy consisted of only two recognized soil zones. The uppermost is a reddish brown sandy loam which extends to a depth of four to six inches below the present ground surface. Below this zone the soil is more compacted. Starting at four to six inches below the surface, a reddish-brown to yellowish-red clayey loam was encountered. There is some gradation between these two zones. In color, the soils, when moist, fall in the middle range of the yellow-red hue (5YR) of the Munsell Soil Color Charts. In gradation, 100 percent of the soil passes through sieve size No. 10 while 64 to 82 percent of the soil passes through sieve size No. 200.

The soils at Easton are acidic with the pH ranging from 5 to 6.4 on the 31 samples tested. The average pH of all samples from the site is 5.5. The pH factor at the time of excavation was considerably below that necessary to preserve bone in the ground. The pH of soil is one of the most important factors affecting the destruction of buried bone (Biek 1963: 181). Bone will be preserved almost indefinitely if the soil pH is 8 or more, but becomes soluble in soil with a pH of 6.8 or less (Biek 1963: 181-82). Biek's study of Bronze age burials from sites in Great Britain indicates that no bone was preserved in soils having pH of 5.6 or less (Biek 1963: 184-85). This is important with respect to the Easton site for while no bone was found, it is apparent that any bone deposited at the site prehistorically would not have been preserved.

Lithic Resources

Lithic resources which were exploited by the Easton site inhabitants include a variety of materials, most of which were obtained from local sources. Nine categories of lithic material were recognized for Easton. Boone chert is the most intensively utilized material from the site and constitutes over 78 percent of all lithic material found (excluding sandstone debris which was not collected). Boone chert has previously been described in a number of studies (see Beck 1950; Huffman 1958; Wyckoff 1963, 1970; Baldwin 1970; Lopez 1973; and others) and has generally been divided into a number of varieties such as Reed Springs and Keokuk. The Boone chert represented at Easton, however, was apparently collected from stream gravel near the site. Therefore, the varieties which are represented will be considered together and described to indicate the variety of material which is included in this category.

In color, Boone chert has a wide variation including white or cream, grey, brown, purple, blue-grey, red and pink. At Easton, these colors are typically mottled with shades of grey, common combinations being grey and pink, grey and brown, grey and white, and red and pink. Some specimens lack mottling and are grey throughout or are light colored with grey specks. Cortex is most typically brown, yellow-brown, or red. In texture, this chert ranges from slightly grainy with a chalky feel to having no visible grain and an almost plastic feel. The chert is opaque.

Moorefield chert represents only 0.2 percent of the lithic sample at Easton and has its origin on the western fringe of the Ozark uplift of northeastern Oklahoma (Wyckoff 1970: 129). It is known to occur in river gravels as well as in the Moorefield formation in Mayes and Wagoner Counties (Lopez 1973: 101). Moorefield chert is a very dark, black to blue-black, opaque chert with a slight luster. It either has no visible grain or the grain is very fine.

Frisco flint is also minimally represented at Easton, making up only 0.9 percent of the lithic sample. Frisco is generally a light colored grainy flint (Evans 1958). Color ranges from white, which is most common, to blue or grey. Red or pink examples also occur and have a waxy luster. These specimens may represent heat treated Frisco. The actual texture may be either like quartzite or else very fine grained. Frisco is slightly translucent on thin flakes. Sources for Frisco are located in the Pontotoc, Coal, Johnston County area (Evans 1958; Amsden 1961) and the Marble City area in northern Sequoyah County (Amsden 1961).

Kay County flint is represented by one flake, less than 0.01percent of the total lithic sample. This flake is a banded and fossiliferous high quality flint and had its origin in the north-central Oklahoma area (Skinner 1957).

Novaculite is waxy lustered material with great variation in color and texture. It is typically slightly translucent and ranges in color from blue, grey, and black to red (see Saunders 1974: 6). Sources for novaculite are to the east of Easton in west-central Arkansas (Wyckoff 1970: 129) and south in the Ouachita Mountains of southeast Oklahoma (Wyckoff 1970; Saunders 1974). Novaculite constitutes only 0.7 percent of the lithics from Easton.

The four lithic categories just mentioned, Moorefield, Frisco, Kay County, and Novaculite, are of particular interest at the Easton site. They are the only types found which are not known from the local gravel sources and were apparently carried into the area. These categories when combined constitute only 1.8 percent of all lithic material from the site, and are represented only as artifacts, thinning flakes, or broken flakes with no cortex. No decortication flakes of any of these materials were found.

Unidentified cherts include those materials which were not classifiable with the above chert categories. Most common among the unidentified cherts are translucent materials which vary in color from blue-grey to reddish or brown and are often mottled. Some of the unidentified chert flakes exhibit waterworn cobble cortex. Unidentified cherts form 7.7 percent of the total lithic sample.

Unidentified quartzite is a residual category for all grainy quartzite materials (metamorphosized sandstone) found at the site. The quartzite from Easton is primarily dark and very fine grained opaque material with colors being primarily grey but often blended with red, green or brown. This material is like that from Fourche Maline Creek a few miles southwest of Easton. A more limited quantity of translucent quartz-like quartzite also occurs at Easton. Some of the quartzite was apparently collected from local gravels as indicated by specimens with cobble cortex on their dorsal surface. Quartzite constitutes 11.1 percent of the Easton site lithics.

Hematite occurs in local sandstone outcrops as nodules. This red iron oxide material from Easton is fine grained. The sandstone from the site is a reddish brown dense and well consolidated material. The sandstone has a very fine texture and is not crumbly.

In summary, almost all (probably on the order of 98 percent) of the lithic material from Easton was either collected from James Fork Creek near the site or from within a few miles radius. This indicates an intensive utilization of locally available lithic resources with little evidence of long distance trade or travel.

EASTON SITE ARTIFACTS

Introduction

The following is a description of physical characteristics or attributes of the artifacts of human manufacture found at the Easton site. Attributes which are believed to have certain significance in the analysis and/or attributes which are the result of aboriginal tool shaping are considered. The artifacts are grouped under general headings which often suggest their presumed function. Although the level of uncertainty is increased when dealing in functional terms, the potential for a better understanding of the site is also increased provided the functional categories are relatively accurate. By studying the artifacts on a functional basis, it is then possible to do more than simply describe them. The understanding of general site functions becomes possible as does locating potential activity areas and/or tool sets at the site. It is recognized that any argument for activity areas or site functions can be no stronger than is permitted by the accuracy of the original functional interpretations of the artifacts.

The problems faced when dealing with strict functional categories can be seen in this statement, "One cannot. . . be certain of an artifact's function, unless it is hafted, and such finds are rare indeed. For example, I may use my pocket knife as a knife, punch, reamer, scraper, drill, can opener, screw driver or for some other purpose. Likewise, many artifacts listed here as projectile points may have served other purposes such as knives, drills, scrapers, etc." (Bell 1958: introduction). Because of problems such as that noted by Bell, the functional terms used here should not be taken in the strict sense that the tools were limited solely to the performance of the prescribed functions. Rather, the terms are to suggest likely or perhaps most common functions for which the characteristics of the various tools may have been suited.

Artifact Descriptions

Chipped Stone Artifacts

Large Projectile Points - Expanding Stems

Ellis Type (Figure 3a-c)

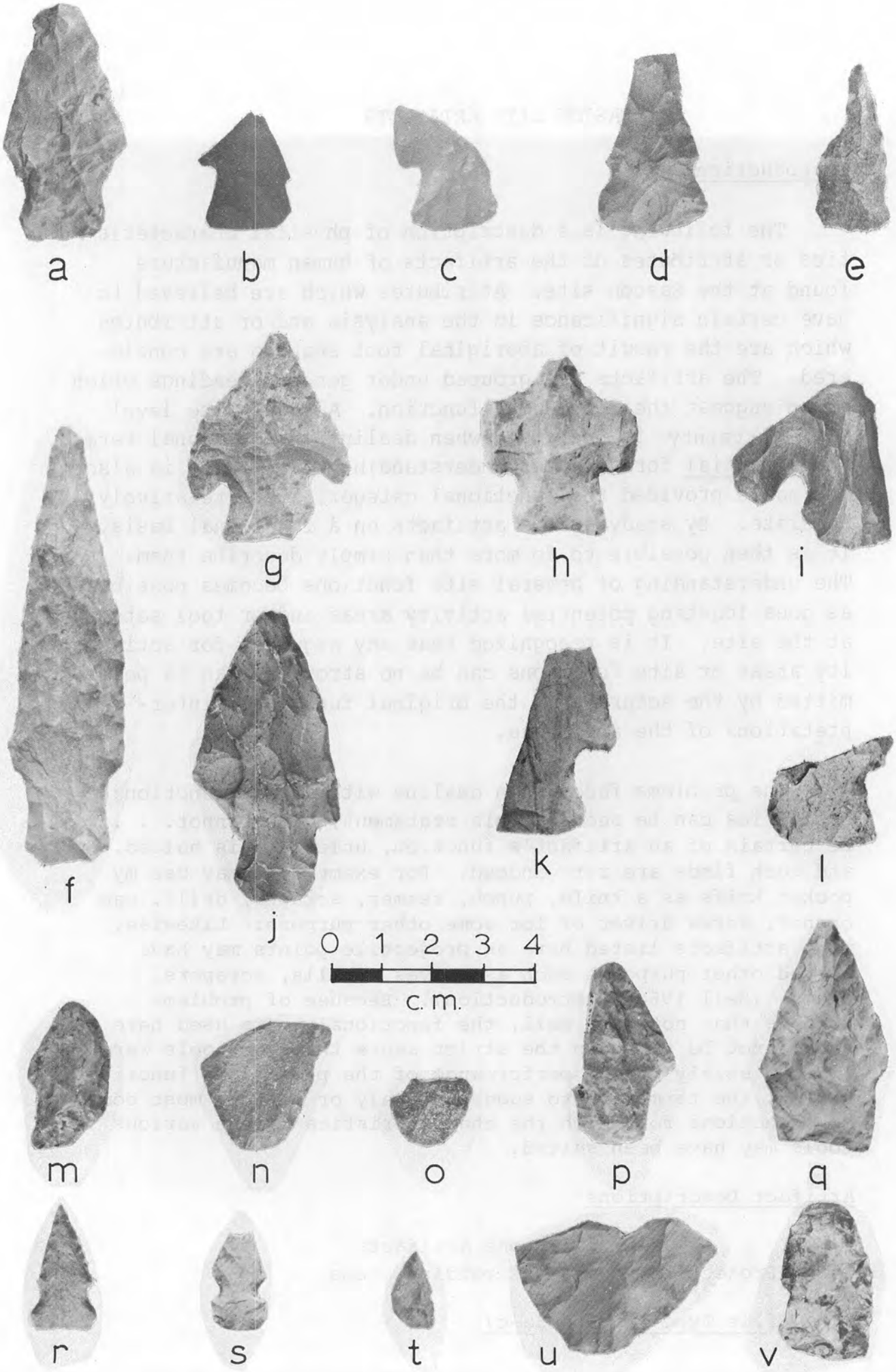

Figure 3. Easton Site Bifaces: a-c—Ellis points; d-e—Godley points; f—Lange point; g-h—Marcos points; i—Marshall point; j—Palmillas point; k-l—Williams point; m—Expanding Stem Type I point; n-o—Gary points; p—Gary Variety A point; q—Contracting Stem Type I point; r—Reed point; s—Keota point; t—Fresno point; u—knife frag.; v—preform.

Number of specimens: 3, all broken

Type definition: Newel and Krieger 1949: 166-67; Suhm, Krieger, and Jelks 1954: 420-21; Bell 1960: 32

Dimensions: The most complete specimen measures 39 mm long. Blade width is not measurable on any of the specimens but basal widths of the three are 17, 17 and 18 mm. All three specimens are 7 mm thick.

Lithic materials: Table 1

Provenience: Table 2

Godley Type (Figure 3d-e)

Number of specimens: 2; 1 broken, 1 complete

Type definition: Jelks 1962; Perino 1968: 26

Dimensions: Both specimens have reworked blades and the larger point is broken at the tip. Length of the complete specimen is 27 mm. Maximum blade width is 15 and 19 mm, while the basal width is 16 and 22 mm. Thickness of both specimens is 7 mm.

Lithic material: Table 1

Provenience: Table 2

Lange Type (Figure 3f)

Number of specimens: 1, complete

Type definition: Suhm, Krieger, and Jelks 1954; Bell 1958: 36

Dimensions: This point measures 71 mm long, 22 mm wide, and 9 mm thick. Basal width is 16 mm.

Lithic material: Table 1

Provenience: Table 2

Comment: Wear is present on flake scar ridges, and the base and stem edges have been ground.

Marcos Type (Figure 3g-h)

Number of specimens: 2; 1 broken, 1 complete

Type definition: Suhm, Krieger, and Jelks 1954: 442; Bell 1958: 42

Dimensions: Both specimens have reworked blades. Length of the complete specimen is 34 mm. Width and thickness of the specimens are 31 and 32 mm, and 6 and 7 mm, respectively. Basal width of both is 18 mm.

Lithic material: Table 1

Provenience: Table 2

Comment: The broken, heat treated (or burned) specimen was reworked to form a hafted drill (Figure 3h).

Marshall Type (Figure 3i)

Number of specimens: 1, broken

Type definition: Suhm, Krieger, and Jelks 1954: 444; Bell 1958: 44

Dimensions: Thickness of this point is 10 mm but the other dimensions are unmeasureable.

Lithic material: Table 1

Provenience: Table 2

Palmillas Type (Figure 3j)

Number of specimens: 1, broken

Type definition: Suhm, Krieger, Jelks 1954: 462; Bell 1960: 74

Dimensions: This specimen has one broken shoulder. It measures 53 mm long, 28 mm wide, and 8 mm thick. The basal width is 16 mm.

Lithic material: Table 1

Provenience: Table 2

TABLE I
EASTON SITE
LITHIC ARTIFACTS

LITHIC DEBRIS CATEGORY	BOONE CHERT	MOOREFIELD	NOVACULITE	FRISCO	KAY CO.	UNIDENTIFIED CHERT	UNIDENTIFIED QUARTZITE	SANDSTONE	HEMATITE	TOTAL
ELLIS	2						1			3
GODLEY	1					1				2
LANGE						1				1
MARCOS	2									2
MARSHALL						1				1
PAMILLAS	1									1
WILLIAMS	2									2
E.S.T.I.	1									1
GARY						1	2			3
GARY – A	1									1
C.S.T.I.	1									1
BASE & STEM SECTION	4					2				6
MIDSECTIONS	22	1	1			4	6			34
TIPSECTIONS	7					3				10
REED	1									1
KEOTA	1									1
FRESNO	1									1
KNIFE FRAGMENT	3									3
PREFORM	1									1
BIFACE FLAKE	1									1
MISC. BIFACE	12					5	4			21
CHOPPER									1	
FTS I-a	3									3
FTS I-b	3									3
FTS I-c	3					1				4
FTS I-d	2						1			3
FTS I-e	1					1				2
FTS I-f	4									4
FTS II-a	8	1				4				13
FTS II-b	6					2				8
FTS II-c	6					1				7
FTS II-d	3					1				4
FTS II-e	1									1
FTS II-f	2					2				4
FTS II-g	6		1							7
SMOOTH ABRAD.								1		1
PITTED STONE								1		1
CRUSHING								1		1
GRINDING STONE								1		1
HEMATITE									13	13
TOTAL	112	2	2			30	14	4	14	178
PERCENT	63%	1%	1%			17%	8%	2%	8%	100%

TABLE 2
EASTON SITE
PROVENIENCE OF PROJECTILE POINTS

SQUARE / LEVEL / TYPE	0–38		1–21		1–32		2–21		2–32		3–21	3–32		4–28		4–32		5–19		5–22	5–23		5–25		5–27		5–28	5–29	5–30		5–31		5–32	SURF.	TOTAL
	1	2*	1	2*	1	2	1	2*	1	2	1	1	2	1	2	1	2	1	2*	1	1	2*	1	2*	1	2*	1	1	1	2*	1	2	1		
ELLIS	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	–	–	–	–	3
GODLEY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	2
LANGE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
MARCOS	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
MARSHALL	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1
PALMILLAS	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
WILLIAMS	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	2
EXP. ST.–1	–	–	–	–	–	–	1	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
GARY	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	3
GARY VAR. A	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
CONT. ST.–1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
LG. PT. FRG. BS. & ST.	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2	–	1	–	–	–	6
MID SEC.	1	–	4	–	–	–	1	–	5	1	3	1	–	–	–	–	1	1	–	2	1	–	3	–	–	–	2	3	1	–	–	–	2	2	34
TIP. SEC.	1	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	1	–	–	2	–	–	1	–	–	–	–	2	–	1	–	–	–	–	10
REED	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
KEOTA	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
FRESNO	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
TOTAL	2	–	7	–	1	–	3	–	5	1	4	2	–	4	–	2	2	1	–	5	2	–	6	–	1	–	3	6	4	1	4	–	3	2	71

* (PARTIALLY EXCAVATED LEVEL)

Williams Type (Figure 3k-1)

Number of specimens: 2, broken

Type definition: Suhm, Krieger, and Jelks 1954: 490; Bell 1960: 96

Dimensions: Thickness of the fragments are 5 and 8 mm. The complete base measures 21 mm wide.

Lithic material: Table 1

Provenience: Table 2

Expanding Stem Type I (Figure 3m)

Number of specimens: 1, broken

Type definition: This is a descriptive category for a single Easton site specimen.

Description: This dart point or knife has a small triangular blade which has been reworked. One shoulder was apparently removed during resharpening of the blade, and the other shoulder is small. The stem is slightly expanding with a concave base. One basal corner is broken. The specimen is completely bifacially flaked.

Dimensions: The specimen measures 28 mm long, 16 mm wide, and 7 mm thick. The base is broken.

Lithic material: Table 1

Provenience: Table 2

Comment: The base and stem section of this point is very much like that of the Lange point from Easton. The blade is much shorter than typical Lange examples, but this may be due to continual resharpening which would also have reduced the shoulders.

Large Projectile Points - Contracting Stems

Gary Type (Figure 3n-o)

Number of specimens: 3, all broken

Type definition: Newel and Krieger 1949: 164-65; Bell 1958: 28

Dimensions: Only basal fragments are represented. The most complete base is 22 mm wide and 7 mm thick.

Lithic material: Table 1

Provenience: Table 2

Comment: The point represented by the large base was made on a flake with only marginal retouch on its ventral surface. This method of manufacture is distinct from the notched dart points represented at the site which are made from biface preforms.

Gary Variety A (Figure 3p)

Number of specimens: 1, broken

Description: This point has a broken, triangular, straight edged blade. The intact shoulder is prominent but not barbed. Stem edges are nearly parallel and the base is only slightly convex, giving the stem a nearly rectangular appearance.

Dimensions: The broken length is 35 mm, blade width is not measureable, and the thickness is 6 mm. The stem measures 15 mm wide.

Lithic material: Table 1

Provenience: Table 2

Comment: This point is made from a flake blank. The base of the point represents the proximal end of the flake.

Contracting Stem Type I (Figure 3q)

Number of specimens: 1, broken

Type definition: This is a descriptive category for a single point from Easton.

Description: This is a medium sized dart point with a triangular blade and a long slightly contracting stem. The blade edges are straight with slight but distinct shoulders. The stem edges are ground. Basal outline cannot be determined because the extreme basal end is broken.

Dimensions: The specimen measures 44 mm long, 25 mm wide, and 7 mm thick. The stem is 19 mm wide.

Lithic material: Table 1

Provenience: Table 2

Large Projectile Points - Fragments

Base and Stem Sections

Number of specimens: 6

Description: These are fragments of large notched points having expanding stems. None of the specimens are complete enough for typological identification.

Lithic material: Table 1

Provenience: Table 2

Comment: These fragments are from notched expanding stem dart points.

Midsections

Number of specimens: 34

Description: Included here are blade and blade edge fragments of points. All specimens are bifacially worked

and two show evidence of heat fracturing. None of these are complete enough for type determination.

Lithic material: Table 1

Provenience: Table 2

Comment: All fragments included here are completely bifacially flaked.

Tip Sections

Number of specimens: 10

Description: These are blade tip fragments of large points which are too incomplete for identification.

Lithic material: Table 1

Provenience: Table 2

Small Projectile Points - Notched

Reed Type (Figure 3r)

Number of specimens: 1, complete

Type definition: Baerreis 1954:44; Bell 1958: 76

Dimensions: This point measures 23 mm long, 13 mm wide, and 4 mm thick with a basal width of 13 mm.

Lithic material: Table 1

Provenience: Table 2

Comment: This point was made on a flake and portions of the original flake surfaces are still present on both surfaces.

Keota Type (Figure 3s)

Number of specimens: 1, broken

Type definition: Perino 1968: 42

Dimensions: The tip is broken but the specimen measures 11 mm wide and 4 mm thick.

Lithic material: Table 1

Provenience: Table 2

Comment: This point was made on a flake and it still retains portions of the original flake scars.

Small Projectile Points - Unnotched

Fresno Type (Figure 3t)

Number of specimens: 1, broken

Type definition: Kelley 1947: Bell 1960: 44

Dimensions: One shoulder is broken but the point measures 15 mm long, about 10 mm wide, and 3 mm thick.

Lithic material: Table 1

Provenience: Table 2

Comment: This small point was made on a curved flake with only marginal retouch on both faces.

Other Biface Artifacts

Knife Fragments (Figure 3u)

Number of specimens: 3, all broken

Definition: This is a descriptive grouping for three bifaces from the Easton site which may have served in cutting activities.

Description: These three artifacts represent completely bifacially flaked tools. Their edges exhibit secondary pressure retouch which suggests resharpening of functional edges.

TABLE 3

EASTON SITE

PROVENIENCE OF OTHER LITHIC ARTIFACTS

SQUARE	0–38		1–21		1–32		1–39	2–21		2–32		3–21	3–32		4–21	4–28		4–32		5–22	5–23		5–25		5–27		5–28	5–29	5–30		5–31		5–32	12–32		SURF.	TOTAL
LEVEL / CATEGORY	1	2*	1	2*	1	2	1	1	2*	1	2	1	1	2	1	1	2	1	2	1	1	2*	1	2*	1	2*	1	1	1	2*	1	2	1	1	2*		
BIFACES																																					
KNIFE FG.	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	3
PREFORM	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
BI. FLK.	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
MISC. BI. FG.	–	–	3	–	1	–	–	–	–	–	–	–	3	–	1	1	–	–	–	3	1	–	–	–	2	–	–	1	1	1	2	–	–	–	–	1	21
CHOPPER	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1
FLAKE TOOLS																																					
FTS I-a	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	–	–	3
FTS I-b	–	–	–	–	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
FTS I-c	–	–	–	–	–	–	–	–	–	1	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	4
FTS I-d	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	3
FTS I-e	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	2
FTS I-f	–	–	1	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	4
FTS II-a	–	–	–	–	1	–	1	–	–	1	–	–	2	–	–	1	–	–	–	2	–	–	1	–	1	–	1	–	–	–	–	–	–	–	–	2	13
FTS II-b	–	–	–	–	–	–	–	1	–	–	1	–	1	1	–	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	8
FTS II-c	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	2	–	–	1	1	–	–	–	1	7
FTS II-d	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1	4
FTS II-e	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
FTS II-f	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	4
FTS II-g	–	–	1	1	–	–	–	1	–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	7
PECK. & GRD. ITEMS																																					
PIT. ST.	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
CRSH. ST.	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
GRIND. ST.	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
SMOOTH ABRD.	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
HEMATITE	–	–	–	–	1	–	–	–	–	1	1	2	3	1	–	–	–	–	2	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	–	–	13
TOTAL	1	–	6	1	6	2	2	3	–	4	2	5	13	2	4	4	–	–	4	8	2	–	3	1	3	–	3	3	1	3	7	2	2	3	–	7	107

* (PARTIALLY EXCAVATED LEVEL)

Dimensions: Only thickness could be measured on these items. They measure 6, 7 and 8 mm thick. Edge angles are 35, 45 and 50 degrees.

Lithic material: Table 1

Provenience: Table 3

Preform (Figure 3v)

Number of specimens: 1, complete

Definition: This is a descriptive category for a single Easton site specimen which may represent an intermediate stage of biface tool manufacture. Such artifacts have generally been called preforms (see Fitting, DeVisscher and Wahla 1966:39; Wyckoff 1970: 47-48).

Description: This specimen is almost completely bifacially flaked, but retains a small area of cortex near the base. Numerous hinged flake scars are present on the specimen. Secondary retouch is present on one edge and the tip, but the tool was apparently never completed.

Dimensions: This item measures 30 mm long, 18 mm wide and 6 mm thick.

Lithic material: Table 1

Provenience: Table 3

Comment: Evidence of wear (?) is present on the tip and lateral edges, but this may have resulted from intentional dulling, or perhaps from use of this rejected biface preform as a scraper.

Bifacially Retouched Flake

Number of specimens: 1, broken

Definition: This is a descriptive category for a single Easton site artifact.

Description: This small flake has been bifacially flaked on both lateral edges. The ends are broken.

Dimensions: This item measures 3 mm thick.

Lithic material: Table 1

Provenience: Table 3

Comment: This may represent an arrowpoint preform.

Miscellaneous Biface Fragments

Number of specimens: 21

Definition: This is a residual category for unassigned biface fragments from Easton.

Description: These are rough and irregular fragments showing evidence of bifacial flaking. They may represent broken preforms or perhaps fragments of certain biface tools. There is much variation in the thickness and size of these items.

Lithic material: Table 1

Provenience: Table 3

Chopper (Figure 4a)

Number of specimens: 1, complete

Definition: This is a descriptive category for one Easton site artifact which may have been used in heavy cutting or chopping activities.

Description: This is a thin rectangular cobble which has been bifacially percussion flaked on one edge. The flaked edge is sinuous and slightly convex in outline.

Dimensions: This tool measures 80 mm long, 72 mm wide, and 22 mm thick.

Lithic material: Table 1

Provenience: Table 3

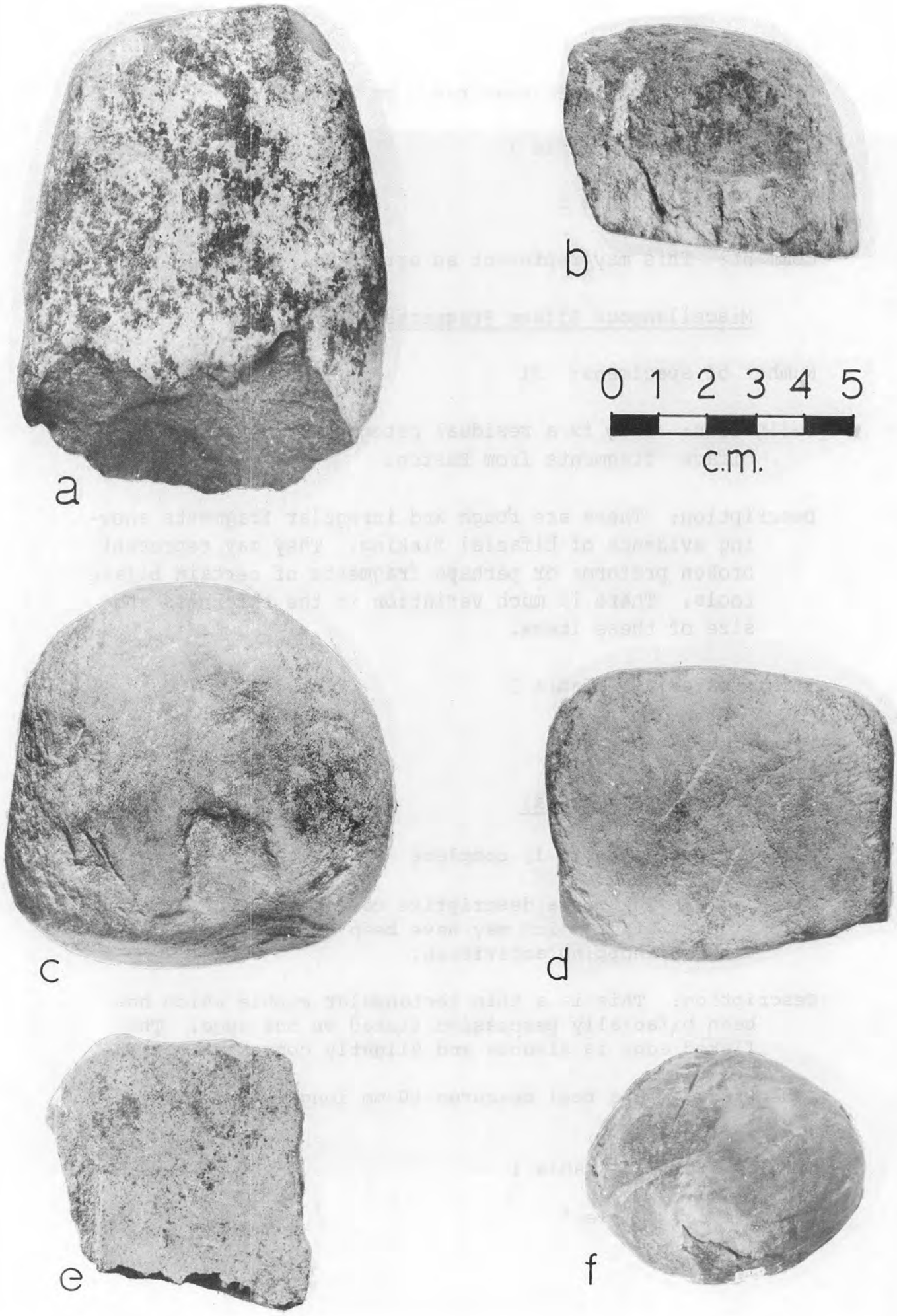

Figure 4. Easton Site Artifacts: a—chopper; b—grinding stone fragment; c—crushing stone; d—pitted stone; e—smooth abrader; f—hematite.

Intentionally Modified Flake Tools - Flake Tools Series I

These flakes are characterized by the regular occurrence of small flake scars along some portion of their marginal edges. These marginal flake scars are thought to be the result of intentional pressure retouch. This retouch served to shape the flake edge to make it more serviceable in the performance of certain activities.

Flake Tools Series I-a (concave scrapers, Figure 5 a-b)

Number of specimens: 3, all complete

Description: These three blank flakes all exhibit one concave retouched edge. The opposite lateral edge of two specimens has also been steeply retouched, this may represent intentional dulling (which would protect the user's finger). One specimen also has an additional, smaller, concave, retouched edge. Retouch on all three flakes occurs only on the dorsal surface.

Dimensions: The concave retouched edges all measure 13 mm long, while the smaller secondary edge on one specimen measures 9 mm. The three long concave edges are all 2 mm deep. Edge angles of the concave edges measure 60, 65 and 65 degrees. The flakes themselves are 24-x-19-x-5, 20-x-23-x-4, and 24-x-14-x-3 mm in length, width and thickness respectively.

Lithic material: Table 1

Provenience: Table 3

Comments: These tools may have served in wood working activities such as preparation of shafts and handles. Similar forms have been called spokeshaves.

Flake Tools Series I-b (notched flakes, Figure 5 c-d)

Number of specimens: 3; 2 complete, 1 broken

Description: Three flakes included here exhibit one short relatively deep retouched section on one marginal edge. Retouch scars occur on the ventral surface of two flakes and on the dorsal surface of the third. One specimen has a second, smaller concavity on the same edge as the first (Figure 5b). Two of the specimens

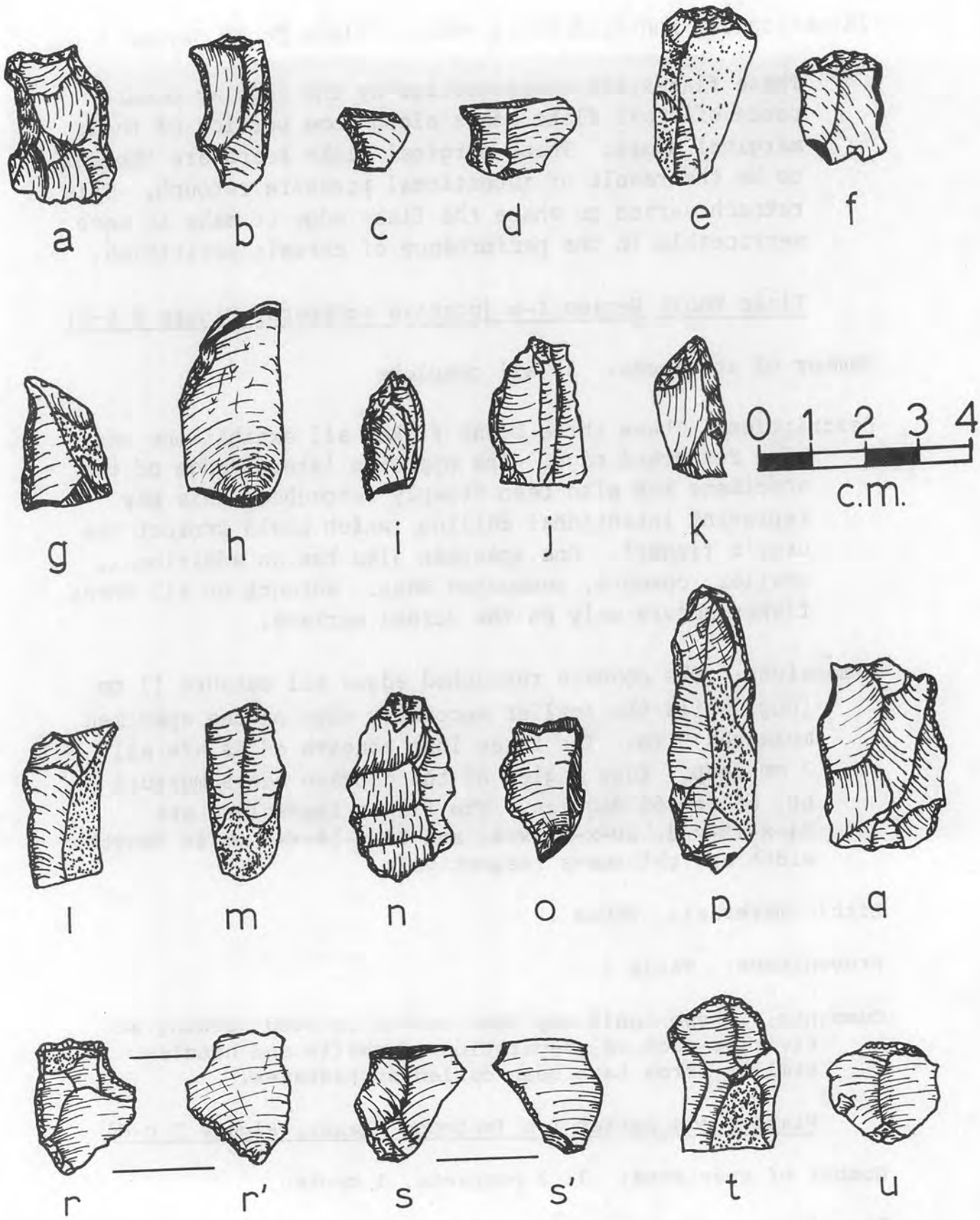

Figure 5. Easton Site Flake Tools: a-b—Flake Tools Series I-a; c-d—FTS I-b; e-f—FTS I-c; g-h—FTS I-d; i-j—FTS I-e; k—FTS I-f; l-m—Flake Tools Series II-a; n-o—FTS II-b; p-q—FTS II-c; r-s—FTS II-d; t-u—FTS II-g.

are blank flakes and one is a secondary decortication flake.

Dimensions: Concave edges of these tools all measure 7 mm wide and are all 1 mm deep. Edge angles of the concave edges measure 55, 60 and 75 degrees. The two complete flakes measure 16-x-21-x-4 and 17-x-22-x-6 mm in length, width and thickness respectively.

Lithic material: Table 1

Provenience: Table 3

Comment: These are distinguished from the concave scrapers only by the smaller size of their concave edges. They may have functioned in similar activities, but may have been used to fashion articles of smaller diameter than the concave scrapers.

Flake Tools Series I-c (distal end retouch, Figure 5 e-f)

Number of specimens: 4; 3 complete, 1 broken

Description: These four flakes have steeply retouched distal edges. Three are blank flakes and one is a secondary decortication flake. Retouch is on the dorsal surface of all four specimens. Edge outlines are convex in three cases and the last is straight.

Dimensions: The complete specimens measure 18-x-19-x-7 mm, 26-x-17-x-7 mm, and 18-x-17-x-5 in length, width and thickness respectively. Length of the retouched edges are 15, 13 and 17 mm. Edge angles measure 70 degrees on three specimens and 75 degrees on the last.

Lithic material: Table 1

Provenience: Table 3

Comment: The steep edge angles of these tools would have made them more serviceable in scraping tasks than in cutting functions (see Wilmsen 1968; Frison 1968).

Flake Tools Series I-d (straight unilateral retouch, Figure 5 g-h)

Number of specimens: 3; 2 complete, 1 broken

Description: These flakes exhibit retouch on the ventral surface of one straight lateral edge. One flake is a secondary decortication flake and two are blank flakes.

Dimensions: The two complete flakes measure 32-x-20-x-6 and 21-x-21-x-5 mm in length, width and thickness respectively. Length of the retouched edges measure 11, 11 and 19 mm. Edge angles measure 55, 70 and 75 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: These tools may have served in various scraping activities.

Flake Tools Series I-e (irregular unilateral retouch, Figure 5 i-j)

Number of specimens: 2, both broken

Description: These two blank flakes each have one irregular retouched lateral edge. Retouch occurs on the dorsal face of each flake. The edges are very slightly serrated and irregular in outline.

Dimensions: These flakes measure 24-x-16-x-6 mm and 20-x-11-x-5 mm in length, width and thickness respectively. Length of the retouched edges are 24 and 18 mm. Edge angles of the tools are 60 and 70 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: The irregular, serrated nature of these tool edges would have made them more serviceable for cutting than heavy scraping activities.

Flake Tools Series I-f (irregular bilateral retouch, Figure 5-k)

Number of specimens: 4, all complete

Description: These four flakes all have two convergent retouched edges. Edge outlines are irregular. Retouch occurs on the dorsal face of three flakes and on the ventral face of the fourth specimen. Three flakes are of the secondary decortication type and one is a blank flake.

Dimensions: These flakes measure 24-x-17-x-8, 21-x-12-x-5, 13-x-9-x-6 and 14-x-18-x-7 mm in length, width and thickness respectively. Length of the retouched edges ranges from 18 to 8 mm. Edge angles range from 60 to 75 degrees with 65 the most common.

Lithic material: Table 1

Provenience: Table 3

Comment: The steep irregular edges of these retouched flakes, and their generally small size make determination of their use uncertain.

Incidentally Modified Flake Tools - Flake Tools Series II

Flake tools included under incidentally modified flakes have minute flake scars occurring regularly along some portion of their margins. The flake scars are the result of usage, not intentional retouch. These flakes were used for various purposes after they were removed from cores, and are distinguished from intentionally modified flake tools in that their edges were not shaped by secondary flaking prior to use. Incidentally modified flake tools may have been used in the same tasks as some retouched flakes. They were selected for use because their edges were naturally suited for the performance of some task, whereas the edges of intentionally retouched flakes had to be modified in order to serve in a given activity more effectively. It is possible that some intentionally retouched flake tools may have been utilized prior to intentional edge shaping.

Flake Tools Series II-a (unilateral straight edge, Figure 5 l-m)

Number of specimens: 13; 6 complete, 7 broken

Description: These flakes exhibit incidental flake scars along one straight lateral edge. Flake scars occur on the ventral face of two specimens and on the dorsal surface of the remaining flakes. Flake types are represented by seven secondary decortication flakes and six blank flakes.

Dimensions: The complete flakes measure 28-x-15-x-5, 19-x-15-x-6, 17-x-22-x-5, 17-x-16-x-4, 18-x-6-x-3, 13-x-9-x-4 mm in length, width and thickness respectively. Length of the utilized edges are 11, 11, 12, 14, 14 and 15 mm. Edge angles of these edges measure 40 degrees on four specimens, 45 degrees on two, 50 degrees on two, 55 degrees on two, and the last three measure 30, 25 and 20 degrees. This gives a range from 20 to 55 degrees with an average of about 41.

Lithic materials: Table 1

Provenience: Table 3

Comment: These tools may have served in a variety of cutting activities judging from the relative acuteness of their edge angles.

Flake Tools Series II-b (unilateral irregular edge, Figure 5 n-o)

Number of specimens: 8; 6 complete, 2 broken

Description: These flakes exhibit incidental flake scars along one lateral edge which is irregular in outline. Flake types are represented by two secondary decortication flakes, five blank flakes and one biface thinning flake. Incidental flake scars appear on the dorsal face of seven flakes and on the ventral surface of the last.

Dimensions: The complete flakes measure 30-x-20-x-4, 15-10-x-3, 11-x-16-x-3, 19-x-15-x-8, 24-x-23-x-9, and 20-x-15-x-6 mm in length, width and thickness respectively. Length of the utilized edges ranges from 8 to 18 mm, with all but one measuring between 14 and 18 mm. The average of the edge length measurements is 14.3 mm. Edge angles range from 25 to 45 degrees, with the most common edge angle being 25 degrees (4 specimens). Only two specimens measure over 35 degrees and the average of all specimens is about 31 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: The acuteness and irregular nature of the edges of these flake tools would have made them well suited to certain cutting tasks.

<u>Flake Tools Series II-c (bilateral irregular edges, Figure 5 p-q)</u>

Number of specimens: 7; 5 complete, 2 broken

Description: These flake tools exhibit incidental flake scars along both lateral edges which are irregular in outline. Flake scars occur on the dorsal face of 6 specimens and only on the ventral face of the last. Flake types are represented by one secondary decortication, two blank, and four biface thinning flakes.

Dimensions: The complete flakes measure 45-x-17-x-4, 29-x-23-x-6, 20-x-27-x-5, 20-x-11-x-3, 15-x-11-x-2, in length, width and thickness respectively. Length of the utilized edges ranges 15 to 23 mm with the average being 18.5 mm. Edge angles of the utilized edges average about 27 degrees with a range of 20 to 45 degrees. The most common edge angle is 25 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: These flake tools would have been well suited in the performance of cutting activities requiring acute and irregular edged tools.

Flake Tools Series II-d (alternate bilateral flaking, Figure 5 r-s)

Number of specimens: 4; 2 complete, 2 broken

Description: These four flakes have flake scars which resulted from use of both lateral edges. These small incidental flake scars occur in a regular fashion on alternate faces of the opposite lateral edges. That is, the incidental flaking occurs on the dorsal surface of the left lateral edge and on the ventral surface of the right lateral edge (when the flakes are viewed with the proximal end down). One specimen has incidental retouch on both the ventral and dorsal surfaces of the left lateral edge. Edge outlines are irregular. Flake types are represented by two biface thinning flakes and two blank flakes.

Dimensions: The two complete flakes measure 24-x-19-x-3 and 22-x-18-x-4 mm in length, width and thickness respectively. Length of utilized edges range from 9 to 24 mm with the average being 16.5. Edge angles measure from 20 to 45 degrees with all but two between 20 and 35. The average of all (8) edge angles is 30.6 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: These flakes were probably used in various cutting or slicing activities, and are believed functionally similar to Series II-c.

Flake Tools Series II-e (concave distal end)

Number of specimens: 1, complete

Description: This flake exhibits wear and incidental flake scars on the dorsal surface of the distal end which is concave and irregular in outline. The tool is a biface thinning flake.

Dimensions: The flake measures 21-x-24-x-3 mm. Length of the utilized edge is 14 mm. The edge angle is 25 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: The sharp, irregular and acute edge of this flake was probably used in cutting or slicing activities.

Flake Tools Series II-f (straight distal end)

Number of specimens: 4; 1 complete, 3 broken

Description: These small flakes have incidental flake scars and wear polish on a straight portion of their distal ends. Flake types are represented by two secondary decortication and two blank flakes. Incidental flake scars occur on the dorsal surface of all specimens.

Dimensions: The complete flake measures 11-x-19-x-3 mm in length, width and thickness. Utilized edge lengths vary from 7 to 10 mm, the average is 8.5. Edge angles of the utilized edges are all from 20 to 25 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: These tools are very small and have short, straight edges. They may have served in a variety of activities, but their acute edges would probably have been more serviceable in cutting or slicing than in strenuous scraping.

Flake Tools Series II-g (convex distal end, Figure 5 t-u)

Number of specimens: 7; 4 complete, 3 slightly broken

Description: These flake tools exhibit incidental flake scars and use polish on their convex distal ends. These attributes occur on the dorsal surface of six specimens and the ventral surface of the last. Edge outlines are all somewhat convex, but are irregular on two specimens. Flake types are represented by three secondary decortication and four blank flakes.

Dimensions: The flakes measure 21-x-26-x-8, 19-x-33-x-7, 28-x-20-x-4, 15-x-26-x-5, 18-x-20-x-5, 18-x-18-x-4, 17-x-10-x-3 mm in length, width, and thickness respectively. Length of utilized edges range from 7 to 31 mm with the average length being 17 mm. Angles of the utilized edges measure from 25 to 50 degrees with the average of all angles being 37 degrees.

Lithic material: Table 1

Provenience: Table 3

Comment: These flakes probably served in a variety of functional situations, and although the edges on some are relatively acute, they might be considered a multifunctional tool type (see Hofman 1973: 5-9).

Pecked and Ground Stone Artifacts

Pitted Stone (Figure 4-d)

Number of specimens: 1, complete

Description: This is a rectangular fist-size piece of sandstone with two small depressions pecked into the surface of the opposite faces. These pecked surfaces also show evidence of grinding.

Dimensions: This item measures 75-x-56-x-44 mm. One pecked area measures 24-x-16 mm across the 1.7 mm deep while the opposite depression measures 20-x-14-x-1.2 mm.

Lithic material: Table 1

Provenience: Table 3

Comment: This item could represent a nutstone used for cracking and grinding hard shelled nuts. It is not believed to represent an anvil stone used to support a core during flake removal because the depressions are relatively smooth and were apparently not caused by a hard or sharp object.

Crushing Stone (Figure 4-c)

Number of specimens: 1, complete

Description: This is a relatively round sandstone cobble which has been pecked and worn on its edges.

Dimensions: The tool measures 78-x-64-x-54 mm.

Lithic material: Table 1

Provenience: Table 3

Comment: This stone may have been used in crushing and grinding of vegetable materials as evidenced by its pitted but polished edges. It is not believed to represent a hammerstone used in lithic tool manufacture because of the evidence of soft wear polish. The irregular surfaces of this specimen distinguish it from the grinding stone.

Grinding Stone (Figure 4-b)

Number of specimens: 1, broken

Description: This fragment represents the corner of a unifacial grinding stone or mano which shows peck marks and wear on one convex surface. This stone had been shaped by pecking on at least a portion of its edges.

Dimensions: This item is too fragmentary to measure.

Lithic material: Table 1

Provenience: Table 3

Comment: This artifact is believed to have been used during processing of plant foods such as seeds or nuts and was probably used in conjunction with a grinding basin or slab.

Smooth Abrader (Figure 4-c)

Number of specimens: 1, broken

Description: This is a thin tabular piece of sandstone with one flat surface which has become exceptionally smooth through use.

Dimensions: Broken, this specimen measures 55-x-52-x-16 mm.

Lithic material: Table 1

Provenience: Table 3

Comment: This may have been used for sharpening or polishing of certain (possibly wooden?) articles.

Hematite (Figure 4-f)

Number of specimens: 13

Description: These fragments of hematite are generally small in size and red to yellowish-brown in color. They are soft enough that they could easily have been ground into powder. Several of the specimens show evidence of abrasion; this, however, may not be solely the result of aboriginal activities due to the ease with which these specimens can be scratched.

Dimensions: The range in size is from 50-x-48-x-30 to 10-x-6-x-5 mm, with most specimens being nearer the lower size extreme.

Provenience: Table 3

Comment: Hematite could have been ground into powder form and mixed with grease or fat to form red paint.

Ceramic Artifacts

Shell Tempered Plain Ware

Woodward Plain (Figure 6a-g)

Number of specimens: 39 sherds; 36 body, 3 rim

Definition and descriptions: Hall 1951; Freeman and Buck 1960; Wyckoff 1970; Brown 1971.