

# An Archeological Survey of Southwest Virginia

*C. G. Holland*



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NUMBER 12









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## ABSTRACT

Holland, C. G. An Archeological Survey of Southwest Virginia. *Smithsonian Contributions to Anthropology*, 12: 1-194. 1970.—Seventeen counties of southwestern Virginia, which are bounded by North Carolina, Tennessee, Kentucky, and West Virginia, were surveyed archeologically in 1963-1964. Aboriginal occupation was found to extend from about 9000-8000 B.C. to A.D. 1700. The sites and occupational debris of pottery, stone, and bone are described, classified, and analyzed to construct an outline of the prehistory of the region and its cultural relationship with surrounding areas.



## Preface

A grant of \$3100 was made to the Smithsonian Institution by the National Science Foundation (GS-59) in 1962 to conduct an archeological survey in southwest Virginia with the author as principal investigator. The first season's work began in May 1963 in Montgomery County and ended in August in Lee County when crop growth drastically obscured the location of sites and archeological finds. During the summer, sites were discovered in the counties of Roanoke, Giles, Montgomery, Pulaski, Wythe, Smyth, Washington, Russel, Tazewell, Dickenson, Wise, Scott, and Lee (Figure 1). Since only a part of the funds had been spent the National Science Foundation granted a fiscal extension for the summer of 1964. In that year the survey began in Patrick County in April and continued until June when the funds were exhausted. Sites were located in Patrick, Henry, Floyd, and Grayson Counties in Virginia and Stokes and Alleghany Counties in North Carolina (Figure 1). Sites in North Carolina were discovered as a result of the meander of streams across the Virginia-North Carolina state line. During the first season's work I had the help of Mr. Robert D. Ricketts, then a student of the University of Virginia.

The survey attempted to find as many sites as possible in the southwestern part of Virginia and recover from them sufficient material to classify and reconstruct the prehistory of the area. Two hundred and twenty-nine sites were recorded and a total of 21,808 potsherds, 21,654 flakes, 2,060 artifacts mostly of stone but also of shell and bone, 5,180 animal bones and bone fragments, and 7,550 riverine snail and mussel shells were collected for analysis. Specifically, no particular cultural stage, such as Archaic Period sites was singled out for special attention. Excavation was limited to small strata-cuts on sites that appeared to have some depth, and from which collections from stratified levels below the surface might increase the overall information from a temporal standpoint by showing cultural changes through time.

Henry Mercer at the end of the nineteenth century conducted the first archeological survey in the area, beginning on New River. Primarily he was looking for evidence indicating how and when the first men reached the Atlantic Seaboard in geologically remote times, or according to Lenape legend, about A.D. 1370. It may be of more than passing interest to note his philosophy. Using the analogy of caves in Europe, he postulated two hypotheses (Mercer, 1894, p. 285):

- (1) Caves besetting the mountain passes and river pathways by which early man must have first penetrated the great forest and crossed the Appalachians would likeliest contain the complete record of his presence; and
- (2) more than this, a long series of them [caves] by the river might well show the direction of migration by the increased number of layers or the greatest fossil age, of the man-gnawed bones, as we proceeded up or down stream.

Other surveys have been conducted here in recent years. One was organized by a retired Navy captain, Robert Wainwright (1915) who worked as a volunteer for the Bureau of American Ethnology in the early part of this century. His reports provided data for relocating sites, but no material that could be used to determine cultural affiliations. Waldo R. Wedel of the National Museum of Natural History in 1940 con-

ducted a reconnaissance near Saltville reporting his major discoveries briefly (Wedel, 1951). Ralph Solecki (1949), working for the River Basins Survey of the Smithsonian Institution in 1948 located 11 sites in Giles County, Virginia, and numerous others in West Virginia adjacent to Giles County. Where possible I have drawn on his data and tried to integrate them with this study. Evans' report on Virginia ceramics (1955) consolidates several separate studies from the area, including Solecki's. In this he delineated the New River and Radford pottery series, used in this report (pp. 61-67), and suggested that southwest Virginia was in the southern part of his larger Allegheny Ceramic Area. Only now has the extensive fieldwork of the present study broken Evans' larger ceramic areas into smaller components, associated each with particular pottery series, revised his seriation in the light of excavated sequences and carbon-14 dates, and added data from the Blue Ridge and Piedmont Uplands.

Mr. Harvard Ayers in September 1965 conducted a survey for the River Basins Survey in the neighborhood of Independence, Virginia, on New River. His report (1965), made available through Dr. Robert L. Stephenson then of the River Basins Survey after my manuscript had been written, adds to, but does not alter, the general concepts.

In contrast to the professionals, the local collectors are a potent group in southwest Virginia archeology and I am indebted to some of them for much help. On the other hand, they have been a most destructive force. About 40 years ago one of a family of several brothers began to dig at night in open sites and to enter caves for artifacts. Through the following years this man with single-minded determination dug in nearly all the open, pottery-bearing sites and caves within a large radius of Saltville. The artifacts sought were mainly pipes, ear ornaments, shell pendants and similar objects that were highly prized and sold well. Others of the family took up this activity and the pattern spread to embrace many people in their town and surrounding community. It is estimated that 40 to 50 people are now engaged in this destructive digging between Tazewell and Washington Counties.

The economic aspect of this digging is shown by the following prices of artifacts: pot—\$35; string of conch columella—\$40; "ear plugs"—\$25 to \$35 per set of two; tube beads—\$15 for a string 24 inches long; *Marginella* beads—50¢ for a string of 24 inches; gorgets—\$50 to \$75; polished disks—\$5 to \$10; arrowheads—6¢, but if colored red—\$1.00. One collector related to me how he made \$176 after two days digging at a single site by selling the artifacts. When an artifact changes hands, and it frequently does, the problems of determining its provenience and authenticity arise. Fakes are also manufactured here. High prices have also fostered the establishment of "trading posts" that keep suppliers busy. Some of the individuals already mentioned and local farmers who have areas of Indian occupation on their lands or nearby are among the suppliers. Other suppliers come from Arkansas. The demand has also brought collectors from more distant parts of the state to spend a few days or a week of their vacation putting holes in productive sites.

The collectors have built up their own type of archeological procedure over the years. They recognize the significance of a "black circle" in the soil as a village, and look for it; they study the shell patterns on the surface for indications of a place to dig. The "probe," a straight stiff rod is used to distinguish the softer pits and burial areas from the hard clay which it cannot penetrate. Thus the discovery of soft spots saves hours of work in fruitless digging. Some have achieved considerable skill in determining difference between stone-lined graves, fire pits, and graves without stone. Local interest in the chronological age of sites usually is only relative: that is, one site is known to be older or younger than another. This is mostly guesswork but some of the guesses may be correct. Cultural patterns do not go unnoticed, but this is usually on the basis of whether an artifact is "present" or "absent", "plentiful" or "scarce."

The group is heterogenous in age, social standing, and education. There are juveniles and old people, farmers and city officials, people with a fifth grade education, doctors of medicine and doctors of philosophy. But the group is homogeneous as to sex, being pre-



dominantly male. Females may help dig or carry on the traffic in "relics," but the primary energy for digging and selling resides in the males.

The local collectors have their own kind of ethics. They consider it proper to seek permission from the landowner before digging on his property and so they often say virtuously, "I always get the owner's permission. . . ." But when one collector discusses another's activities regarding "permission," it is apparent that hypocrisy in this matter is common. High corn, "gunny sacks," and the darkness of night to hide the digging are exploited to the fullest. For tenants of absentee landlords, a pint of whiskey or some cold beer at the right time works wonders. Owners or tenants who do not allow digging are considered "odd," "fussy," and "problem characters" to overcome. The excuses that some collectors make suggest that they feel guilty for not "having dug the site right." But just what the term "right" signifies is not always clear, although the impression is conveyed that it should bear some relationship to the way a professional would operate. Most likely, however, the professional's method of digging a site is unknown and what is actually meant is that the digging should be done slowly, in the open, and backed up with pictures of the "scamps," as the burials are called. The simple idea of making notes on what is found is never demonstrated.

I know of only a single individual in the area who has even a partly verified collection. Provenience of artifacts is a matter of memory and one individual may stoutly assert that he knows where all his "stuff" came from, whereas if another collector is asked the probable provenience of the same "stuff," his story is entirely different. I definitely got the impression that they are all inherently suspicious of one another.

The individual site reports that follow describe the widespread destruction that has taken place and continues unabated. All information given by local collectors has been used with caution and should be evaluated in the light of their methods of operation.

My thanks go to Dr. Clifford Evans and Dr. Waldo R. Wedel of the Department of Anthropology, National Museum of Natural History, Smithsonian Institution for overall direction. Dr. Evans initiated the project, submitted the charcoal samples to the Smithsonian Radiation and Organisms Laboratory for carbon-14 dating, and gave constructive criticism to the first draft of the manuscript. Dr. Howard Winters of the University of Virginia was most helpful in identifying and discussing many of the stone artifact types. Dr. Richard Mitchell, also of the University of Virginia, analyzed the petrographic thin sections and his companion in the Department of Geology, Dr. Robert Ellison, helped with classifying the riverine shells. In addition, Dr. Richard A. Yarnell of Emory University studied the corn and acorns from Site Pu-9; Dr. Kent Flannery of the Department of Anthropology, National Museum of Natural History, Smithsonian Institution, identified selected animal bones; and Dr. J. P. E. Morrison of the Division of Mollusks, National Museum of Natural History, Smithsonian Institution, identified some riverine snail shells.

Among the host of other people who aided the survey I wish also to express my appreciation to E. R. Arnold, Jr., and Eugene Booth of Saltville, Dr. Sherman Dutton of Martinsville, T. J. Mathews of Galax, and Duval Williams of Eggleston for site information; Mel Jeffries of Radford for permission to excavate Site My-11; Howard A. MacCord of Richmond for county maps and site information, and Dr. J. O. Brew of the Peabody Museum, Harvard University, who kindly let me review the archeological collections from the Middle Atlantic area. My appreciation is also extended to Thomas Kelsey of Charlottesville, who photographed the artifacts, George Robert Lewis, scientific illustrator, of the Department of Anthropology, National Museum of Natural History, Smithsonian Institution, for drawing the figures, and Mrs. Joan Horn of the Smithsonian Institution Press for her editing. I hope others who contributed their special talents to the survey will forgive me for not mentioning them by name.

Finally, I would like to commend Robert Ricketts, at the time a student at the University of Virginia and my companion during the first season's work, for his industriousness and intelligent grasp of the many problems which beset us.

All the collected specimens were turned over to the National Museum of Natural History, Smithsonian Institution, and have been cataloged into the permanent collections of the Archeology Section of the Smithsonian Department of Anthropology.

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22 May 1968*

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# An Archeological Survey of Southwest Virginia



# Introduction

## GEOGRAPHICAL AND GEOLOGICAL SETTING

The state of Virginia is shaped roughly like a triangle with its base on North Carolina and Tennessee to the south, its apex nestled into Maryland to the north, its eastern side to the ocean and its western side against Kentucky and West Virginia from south to north. Southwestern Virginia thus forms an acute angle abutting on these states except Maryland. The 7,000 square miles covered by the survey included the Virginia counties of Carroll, Dickenson, Floyd, Giles, Grayson, Henry, Lee, Montgomery, Patrick, Pulaski, Roanoke, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe, and the North Carolina counties of Alleghany and Stokes. As customary in archeological surveys the sites are identified as to counties (Figure 1).

Being one of the Middle Atlantic States, Virginia has several physiographic zones: a coastal plain on the east, a northeast-southwest trending Mountain Province on the west, and an intermediate Piedmont Uplands. The Piedmont Uplands are found in Henry and Patrick Counties, Virginia, and Stokes County, North Carolina. The Mountain Province is divided geologically into the Blue Ridge Province, the Appalachian Valley and the Appalachian Plateau from east to west, respectively. The western side of Patrick County and all of Grayson, Carroll, and Floyd Counties are in the Blue Ridge Province and hence next to the Piedmont Uplands. The remaining counties are in the other two subdivisions of the Mountain Province.

The basic crystalline rocks of the entire area are granite, gneiss, and schist, which, in the Piedmont Uplands, are covered by red clay topsoil. In the Mountain Province the situation is more compli-

cated. Beginning in the Paleozoic era a subsidence began whose axis ran between Newfoundland to the north and Alabama to the south, forming the Allegheny Trough. As this trough gradually filled with water, erosional sediments were cemented together into limy deposits. The present remnant of the Allegheny Trough is the Allegheny Valley. The maximum thickness of these sediments in the Virginia portion of the geosyncline reached 8 to 10 miles, with an average thickness of 6 miles. Since the Paleozoic era the Appalachian region has been elevated high above sea level and strongly compressed laterally with resulting buckling of previous horizontal strata into their present inclined attitudes.

The separation of the crystalline rocks of the Paleozoic era from the later deposits takes place on the western side of the Blue Ridge Province, running along the western borders of Grayson, Carroll, and Floyd Counties. This is of archeological interest as will be demonstrated later in connection with the analysis of stone materials (pp. 106-112).

The long series of geological events has produced some unusual features in the present day terrain. New River, arising in North Carolina on the Blue Ridge Plateau, flows northwards from its source into Virginia, and enters the Appalachian Valley through a water gap before it turns northwestwards at Radford in Montgomery County to flow through a second water gap at Narrows in Giles County into West Virginia, and into the Kanawha River, a tributary of the Ohio River. North of the city of Radford, the Roanoke River flows southwestward, eventually flowing through the Blue Ridge Mountains onto the Piedmont Plateau and across the coastal plain into the Atlantic Ocean. The minimal separation of 10 miles between the two rivers is not by high mountains, but by a relatively flat rolling plain which would in

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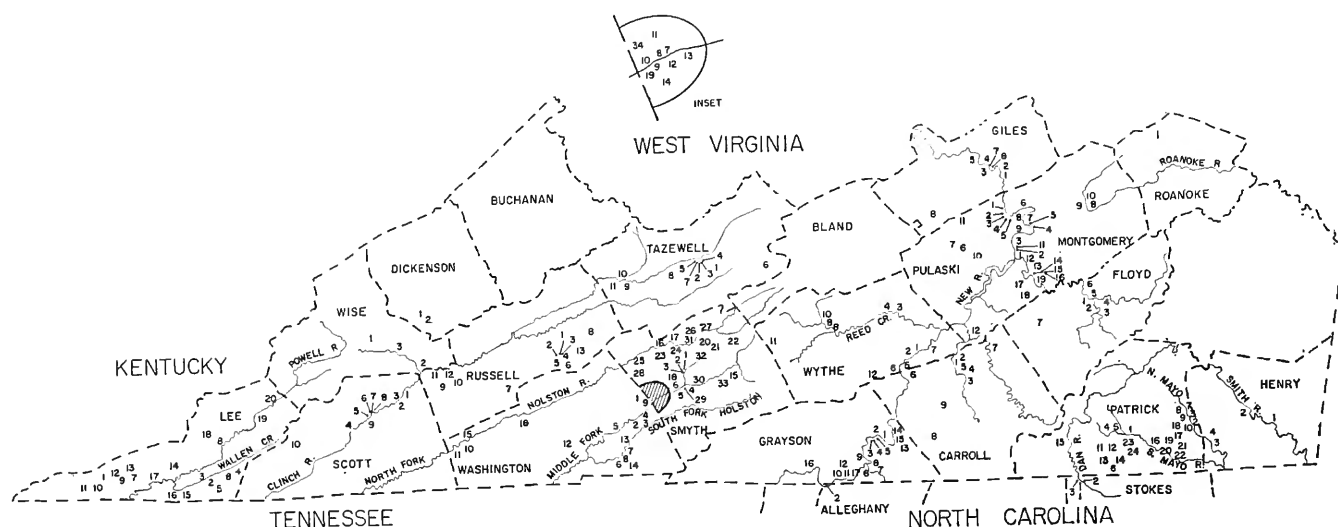


FIGURE 1.—Geographical location of all sites found during the survey. Numbers refer to sites within each county.

no way retard cultural interchange between the two river valleys. Thirty miles west of New River in Virginia are the headwaters of the South Fork of the Holston River. This fork and its parallel more westerly companions (the Middle and North Forks of the Holston), and the Clinch and Powell Rivers, flow southwestwards into the Tennessee River.

New River is separated from the Piedmont Uplands by the Blue Ridge Mountains. The latter run in a northeast-southwest direction, reaching elevations of about 2500 feet above sea level. Streams originating on the eastern slope of the Blue Ridge either flow southward into North Carolina, and join the Yadkin River or flow more eastward, joining the Dan, Mayo, and Smith Rivers, and in turn the Roanoke River

(at this point called the Staunton). Largely because of the rivers the mountains were no barrier to cultural exchange and there is evidence that the exchange went both ways, east to west, and west to east.

The outside cultural influences entering this area by transmission along major streams followed five main courses: (1) from the midwest along the Ohio and Kanawha Rivers up the New River; (2) from the Tennessee and Alabama region by way of the Tennessee River to its headwaters; (3) from the north via the Allegheny Valley along the Shenandoah and Roanoke Rivers; (4) from western North Carolina and further southeast by way of the New River; and also (5) from the southeast along Dan River and its tributaries.

## ECOLOGY

The geological features which distinguish the Valley Province from the Blue Ridge Province and Piedmont Uplands are associated with closely related biological and soil differences. In aboriginal times an Oak-Chestnut forest occupied the Appalachian Valley (Braun, 1950, map foldin). This forest covered not only the Valley but the western slope of the Blue Ridge and, to some extent, the eastern slope as well. In addition there were mixed mesophytic communities, the Cove Hardwoods, composed of 25 to 30 tree species, including sweet buckeye, basswood, sugar maple, silver bell, tuliptree, beech, yellow birch, hemlock, and occasionally chestnut. A different forest

cover began near the crest of the Blue Ridge and extended eastwards over the Piedmont Uplands. To quote Braun (op. cit., p. 260):

The abundance of pine will in general serve to distinguish the vegetation of the Oak-Pine region from that of the adjacent Oak-Chestnut region where the boundary (or rather transition) between the two crosses the Piedmont in Virginia. This boundary in Virginia is related to soils. On that part of the Piedmont which is occupied by the Oak-Chestnut forest, the soils belong to the Chester series of grey-brown forest soils, while in the adjacent Oak-Pine region the soils belong to the Cecil series of the red and yellow, or lateritic, soils of the South.

During the 7000-8000 years represented in the archeological story the major forest patterns probably

were not altered drastically by climatic changes, aboriginal burning, or the actions of the indigenous fauna. Data on the ecology are limited to the Late Woodland and Historic Periods since it is only from these eras that bone and shell have survived. Earlier sites produced no direct evidence of the associated ecology, although indirect evidence is present in the tool assemblages.

The survey produced little evidence that the aborigines utilized the products of the forest. Black walnut shells were found at Sites Pu-9 and Gy-10, and acorns were found at Pu-9. Although undoubtedly the Indians took advantage of all the flora just as they did the fauna, poor preservation and our methods of recovery restricted the yield of information.

The fauna associated with the deciduous forests of this region during the archeological periods as judged from all of the excavated animal bones did not deviate from the historic fauna. From 75 sites representing all periods and types of sites that had bone, 48 had identifiable bones of deer (Appendix: Table 3). Almost as common as deer bones were fragments of box terrapin and bones of turkey. Mixed with these bones, but less frequent, were those of bear, cougar, fox, raccoon, squirrel, rabbit, and elk. Bones of bison, a late-comer to the area, were missing. The same is true of wolf and dog. When the bones of horse, cow, sheep, and pig were found, they were associated with the period of most recent occupancy.

The deer ranged in age from juvenile to adult. Butchering seems to have been done on the village sites to which the entire carcass was transported from the hunt. Long bones, mandibles, and pelvis were broken for marrow, but phalanges, carpals, and tarsals were not. Many vertebrae were found still intact, suggesting that venison was cleaned from around the spines and processed either by cooking or cutting. In two instances calvaria were found to have been broken open in such a way that the occipital, foramen magnum, bullae, and associated basilar bones remained intact. Although this form of breakage allowed the brains to be removed easily it is more usual to find the skulls broken to bits. In view of the widespread use of brains for tanning purposes they may have been sought for this purpose as much as for food.

The rivers provided protein in the form of snails, mussels, turtles, and fish. In this respect they may have rivaled the forests. On both sides of the Blue Ridge Mountains gastropods and pelecypods were cooked routinely. At Site Gy-10 all excavated levels were filled with riverine snail shells, while at Site Ru-3 the ground surface was speckled with them. Very little energy would have been required of the Indians to gather large quantities. As experiment during the

survey demonstrated, it is only necessary to pick up the river rocks to which they cling in great numbers, and scrape them into a basket or other container. However, with repeated harvesting and resulting diminution of the snail population, there were intervals of years when this type of food could not be depended upon locally and the rivers had to be searched farther and farther away from the villages.

The large, distinctive riverine snails of the genus *Io* are confined to the Powell and Clinch Rivers, and the North Fork of the Holston, although they inhabit much of the Tennessee River drainage. South of the Virginia-Tennessee boundary line they are also found in the Middle Fork of the Holston. They do not live in creeks or brooks, nor do they inhabit the creek-sized headwaters of the rivers mentioned. Adams (1915), who made an intensive study of the genus, reported that they were not to be found above Dryden on the Powell, Artrip on the Clinch, and Saltville on the North Fork of the Holston. Analysis of their distributional pattern permits inferences to be made concerning both cultural and biological problems (Appendix: Table 4).

If these snails were gathered for food and transported to habitation sites on other streams, such as New River and Roanoke River where the genus does not occur naturally, the shells would be deposited in the village refuse of sites outside the normal distribution limits. To test this hypothesis the sites where the genus *Io* was found and its natural distributional limits, according to Adams (1915), were plotted on a map (Figure 2). On Powell River the farthest upstream village site on which they were found was Le-14, 15 miles below Dryden. The latter is the upstream limit defined by Adams. On Clinch River the farthest upstream occurrence was at Ru-11, again some 15 miles further downstream than Artrip where Adams placed their upstream limit. Along the North Fork of the Holston they appear at Site Sm-16, 3 miles above Saltville. Granting incomplete coverage of sites along these streams by the archeological survey, the biological distribution of the genus is approximately the same as Adams found in 1915. The snails were not transported out of the general locality in which they biologically occur, although round-trips of 14 to 20 miles were made to gather them. Sites Ru-1, Ru-2, Ru-3, and Ru-13 are 7 to 8 miles west of the North Fork of the Holston where the snails were available, and Site Wg-1 is 10 miles to the east.

The importance of fish in the diet, whose bones are more fragile than mammals and preserved less frequently will require additional excavations to determine. At Sites Gy-10, My-11, and Pu-3 where strata cuts were made, the spines of catfish and

jaws of carp were found. The only other site to indicate the use of fish was Site Gs-3, the rockshelter

dug by Mercer (1894), and in this instance may represent bones from modern fishing.

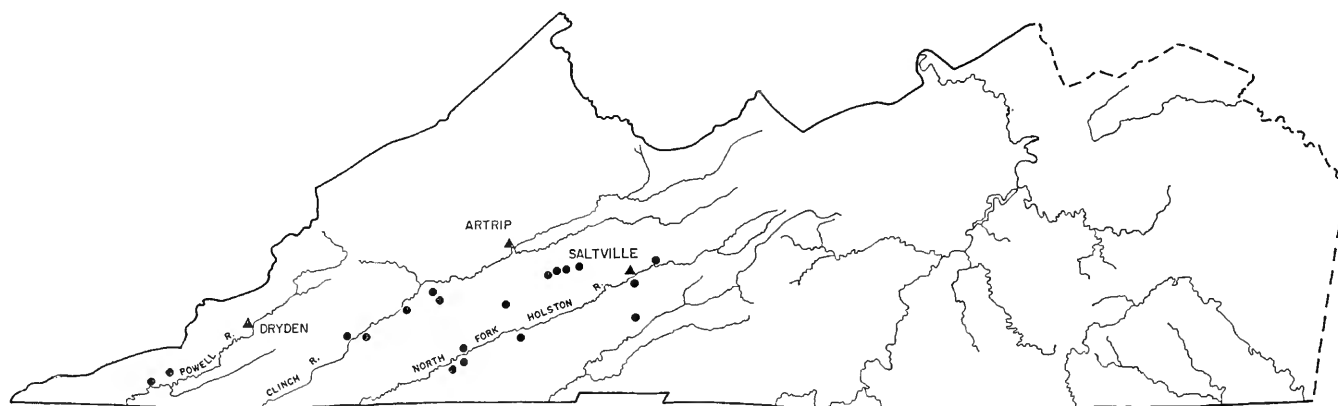


FIGURE 2.—Geographical distribution of the snail genus *Io* on archeological sites.

## Site Descriptions

Each site in Virginia and North Carolina was given a specific designation as it was found, consisting of an abbreviation for the county in which it is located followed by a number in sequential order; thus, Ca-1 means the first site located in Carroll County. (Figure 1). The following abbreviations are used: All – Alleghany (North Carolina); Ca – Carroll; Dk – Dickenson; Fd – Floyd; Gs – Giles; Gy – Grayson; He – Henry; Le – Lee; My – Montgomery; Pk – Patrick; Pu – Pulaski; Rn – Roanoke; Ru – Russell; Sc – Scott; Sm – Smyth; St – Stokes (North Carolina); Tz – Tazewell; Wg – Washington; Ws – Wise; Wy – Wythe.

Wherever possible what appeared to be a single site was divided into segments so that possible cultural differences in the collections could be related to the features at the site. In some instances, Site Gs-6 for example, the physiography of the area immediately suggested such a subdivision. There were also occupation zones that extended exceptionally long distances with seemingly uniform characteristics, such as those at Site My-4. Some of these were broken into arbitrary units if there was sufficient cultural material to collect from each unit for analysis. In other instances the charcoal-stained earth of villages was not distributed in a single circumscribed pattern, but appeared to have been deposited in separate or somewhat overlapping arrangements. These were kept separate where possible and is best demonstrated at Sites Ru-3, Sm-10, Sm-11.

As a notation device to distinguish between sites, units within sites, and levels of excavation without complicated legends or a field catalog system, the following symbols were used and should be kept in mind throughout the report. A site is designated solely by its county abbreviation and number if not divided into sections, e.g. Ca-1. If divided into sections this letter-number combination of the site is followed by a capital letter, such as A, B, C, D. This letter refers to the specific subdivisions described

in the site descriptions, such as Ru-3A and Ru-3B. At excavated sites it was necessary to separate a surface sample from the specimens collected from the various levels of excavation. This is done by appending “S” for “surface” to the county-number designation, such as Gs-8S. The levels of an excavation are shown in inches and are referred to in two ways: Level 0–6 inches, Level 6–12 inches, or sometimes 0–6 inches, 6–12 inches, etc.

The original recording of a site was made on “site survey sheets” furnished by the River Basins Survey, and the location of each site was plotted on U.S. Geological Survey and Coast and Geodetic survey maps. If excavations were made, field notes were kept of soil changes, features, etc., and these added to the survey sheets.

The extent of occupation was estimated from the spread of surface debris, and an attempt was made at each site to recover as much material as possible at the time of the initial visit. In the case of caves, since we were not equipped to descend into deep shafts or progress far underground in those with lateral entrances, we had to settle for what could be observed and found near the mouth.

Sites were located with reference to local physiographic features. An attempt was made to separate the various terraces of rivers and smaller streams when a site had been located nearby. These have been designated as follows: present floodplain is the primary terrace; the next higher and older bank of the stream with an accompanying alluvial plain is the secondary terrace. Where sites were at a distance from any stream, they were located with reference to major geographic features, such as a plateau, a ridge, or the side of a hill.

The sites are arranged by alphabetical order of the county abbreviations and run in consecutive order within a county according to the symbols previously described above. All sites are located on the map of the area under study (Figure 1).

## NORTH CAROLINA

## Alleghany County

*All-1.*—New River crosses and recrosses the North Carolina-Virginia boundary line several times before it enters Virginia, forming arcs which are subtended by the state line. Three and three-quarters of a mile south of Independence, Virginia, is such an arc curving into North Carolina. Midway along the subtended arc, a small stream flows out of the rugged hills through which the New River has cut its bed. One-tenth mile from New River on the west bank of the unnamed stream is a site from which many stone artifacts have been collected after repeated inspections in past years by the owner of the land, Mr. Willard Reeves. The site has been highly eroded and its outlines blurred and unmeasurable.

Material collected: 1 Levanna Triangular point, 28 chert flakes, and 58 quartz flakes.

*All-2.*—Two hundred yards north and slightly east of All-1 is a rounded ridge running east-west which is a hundred feet higher in elevation than All-1. When this ridge had been plowed and planted in previous years, it had yielded many stone artifacts, but no pottery. It was in sod at the time of my visit. Accompanied by the landowner, Mr. Reeves, I collected a few artifacts along the eroded areas by the south side of the ridge.

Material collected: 1 unclassified stone blade fragment, 8 quartz flakes, and 3 chert flakes.

## Stokes County

*St-1.*—A village site on the south bank of Dan River was found one mile north of Asbury, North Carolina. It had been placed on the secondary terrace of the river, and was 25 yards wide and 75

yards long, as outlined by village debris. The eastern end of this site, which undoubtedly extended further in that direction, had been cut through by the main road, and was not accessible to inspection. The site was also outlined by the graying of the sandy-clay soil from deposition of charcoal.

Material collected: 1 Type I drill, 1 biface scraper, 1 adze, 1 unbacked knife, 2 backed knives, 1 knife fragment, 1 Morrow Mountain II point, 1 chert flake, 6 quartz flakes, 33 Grayson Series sherds, and 85 Dan River Series sherds.

*St-2.*—A single Guilford Lanceolate Point and a few chips were picked up on the surface of ridge 0.2 miles from Dan River and 2.0 miles east of Asbury, North Carolina. In talking to the owner of the land, however, it was found that a number of points had been found in the past similar to the Guilford point, and were on display at a local school, which was closed at the time of my visit. The locus of the site is on the summit of a ridge and, measured by the scattered chippage, was 25 yards in size, but this does not allow for plow and erosional scattering. The original occupation was much smaller than this.

Material collected: 1 Guilford Lanceolate point, 8 chert flakes, and 21 quartz flakes.

*St-3.*—There is a large sandy plain northeast of Little Dan River where it enters Dan River. About 0.5 mile south of the North Carolina-Virginia border a collection was made over an area 20 yards wide and 50 yards long. The material was widely scattered over this area and it is possible a larger occupational area exists nearby, but was not found due to grass, forest, and other ground cover.

Material collected: 1 Levanna Triangular point, 7 chert flakes, 9 quartz flakes, 17 Grayson Series sherds, and 7 Dan River Series sherds.

## VIRGINIA

## Carroll County

*Ca-1.*—This is a ridge-top Archaic site found about 2 miles south of Sylvatus. The arch of the ridge is 2,480 feet above sea level while the neighboring valleys are around 2,380 feet. The soil is red clay, filled with shale, and against this background the milky quartz artifacts stood out in contrast. The area of concentration is about 75 yards in diameter,

centering on a small gully which, in years past, may have been the source of a small spring.

In discussing the situation with the landowner it was learned that a quarter of a mile to the southwest from Ca-1 there is a similar site from which a few people had been collecting many stone points. This area unfortunately was completely covered by grass and was, at the time of my visit, unproductive.

Material collected: 1 uniface scraper, 4 unbacked



knives, 4 backed knives, 5 knife fragments, 1 core, 3 hand choppers, 3 Guilford Lanceolate points, 1 Savannah River Stemmed point, 1 unidentified point, 4 large blade fragments, 6 chert flakes, and 109 quartz flakes.

*Ca-2.*—A well-known Indian site in the Sylvatus area is a rockshelter 1.0 mile southwest of the town. It is situated at the base of a precipitous cliff, about 10 feet above Little Reed Creek. There is a fronting apron of 10 by 50 feet to one side of which has been built a small, crude log cabin. The shelter itself, unobscured by the cabin, is 15 feet high at the mouth, 20 feet wide and 10 feet deep. It is said that "Indian pots" had been found in the fill of the apron and shelter. A rock-filled concavity here attested to previous digging and, the only evidence of occupancy by aboriginal groups which I could find was a few riverine snail shells and a deer vertebra on the surface.

*Ca-3.*—On the west or left bank of Little Reed Island Creek, 2.3 miles north and slightly west of Hillsville, there is a small alluvial plain abutted by steep hills to the west, and an unnamed creek to the east. Within an area 20 yards in diameter a series of chips, predominantly milky quartz, associated with worked quartz fragments, were picked up in a cornfield which had been recently washed by rain. This appears to have been an Archaic site of limited size and duration of occupation.

Material collected: 1 used lamellar flake, 1 hand chopper, 1 large blade fragment, 70 quartz flakes, 3 chert flakes, and 2 quartzite flakes.

*Ca-4.*—This is another of the small Archaic occupation sites that occur on the summit of ridges. It was found 4.0 miles north of Hillsville on a ridge which trends northeast and southwest at 2,600 feet above sea level, and the area of occupation is not more than 10 yards in diameter. One of the complicating factors at this site is that milky quartz, in the form of spalls and cobbles, occurs over the surface, and these have been broken further by plowing over the years. The chip collection, entirely quartz, was inspected thoroughly before being accepted as the product of knapping and not accidental breakage.

Material collected: 1 Guilford Lanceolate point and 34 quartz flakes.

*Ca-5.*—A very small Archaic site was discovered by surveying the bluffs overlooking Mill Creek. This particular one is on the west bank, 40 feet above stream level and is about 10 yards in diameter, adjacent to the edge of a bluff. It is 0.7 mile southwest of the junction of Mill Creek with Little Reed Island Creek, a locality called "Richardson" on topographic map, and 0.5 mile northeast of "Early," a place on Route 52 where the road crosses Mill Creek.

Material collected: 1 unbacked knife, 1 core, 1

Hardaway Sidenotched point, 2 chert flakes, and 19 quartz flakes.

*Ca-6.*—An extensive Archaic village, which has been scavenged for artifacts many years, lies in a swale 1.7 miles southeast of Austinville. The entire extent of the occupation is unknown but, as described by informants, must cover several acres. At the time of my visit most of this land was in sod with only about half an acre under cultivation. This small section was examined with permission of the owner. This site has had brief mention in the literature (Michael, 1963, 1964). A cache of rhyolite blades was discovered by the owner on an adjacent farm that has been reported by Holland (1964, p. 49).

Material collected: 61 chert flakes, 42 quartz flakes, 2 quartzite flakes, 1 ferruginous sandstone flake, 4 rhyolite flakes, 1 large blade fragment, 1 Type III drill, 1 backed knife, and 2 knife fragments.

*Ca-7.*—The geologic separation of two occupations is seldom so obvious as at this site which lies on the northeast side of Rood Creek, 2.2 miles southwest of Panther Creek Church. On the primary terrace, adjacent to the stream the owners reported that pottery had been plowed up in the past. At the time of the survey it was in pasture with dense sod. A secondary terrace rises 4 to 6 feet above the primary terrace. The bank, which at one time was sharply cut off, is now rounded from erosion and plowing. Between this old bank of Rood Creek and the local parallel road, a distance of 10 to 20 yards, is a pre-ceramic occupation which has no resemblance to the material described as coming from the lower terrace.

Material collected: 1 Type III drill, 2 unbacked knives, 1 backed knife, 2 knife fragments, 5 large blade fragments, 2 Guilford Lanceolate points, 1 Lamoka point, 1 Pulaski point, 1 unidentified point, 21 chert flakes, 43 quartz flakes, 3 quartzite flakes, and 4 rhyolite flakes.

*Ca-8.*—An extensive soapstone stratum outcrops 4.2 miles southwest of Galax in what is locally known as Coal Creek region. In the recent past in order to plow the land, or to make it fit for pasture, the surface boulders of soapstone have been collected into large oval piles, or arranged in straight rows to form fences. Several partly worked soapstone vessels were discovered in the fencing. Additionally, on the same hillside, but northeast of the pasture land and within the forest surrounding the pasture, other fragments of both completely and incompletely worked soapstone vessels were found. Under this forest cover quarry pits could be outlined while none could be found in the adjoining pasture. No tools or other cultural objects accompanied the soapstone artifacts (Plate 1a, b).

*Ca-9.*—With considerable industry Alden Russell

of Woodlawn had dug into a very small shelter on the southeast bank of Glade Creek. The floor of the shelter is no more than 10 square feet in size, and is only 3 feet above normal water level of Glade Creek. His excavation reached to water level and covered a surface area of about 4 square feet. This resulted in his finding a Guilford Lanceolate point above 2 potsherds tempered with a crushed igneous stone. The actual depths of these artifacts were not remembered by Mr. Russell, only the sequence in the ground; however, it would appear that the relationship is not temporally correct, but instead reversed.

In this study the site designation indicates the presence of a Guilford Lanceolate point only, not a habitation site.

### Dickenson County

*Dk-1.*—Dickenson County is furrowed by narrow valleys through which flow small streams northwards toward New River in West Virginia. The ridges crest at about 2500 feet above sea level, are narrow and dendritic, and are either covered with trees or grass. Areas suitable for surface collecting were few and far between on the Cranenest and McClure Rivers.

Near Leck local informants described a valley site from which had come a steatite disk, stone gorget, and an assortment of Archaic Period projectile points. We visited the site and were unable to discover any evidence of a habitation except a single chert flake. This may have been due to the 6-foot tall weeds and dense ground cover. It was in searching for this unproductive site that we came across Dk-1 by accident.

Near Leck, State Route 652 has been built on the winding crest of a ridge, generally surrounded by forest. Enroute to the unproductive site mentioned, we came to a cornfield, the only open area in the neighborhood. The owner who was there weeding the corn stated her son had collected as many as 100 points in the acre of corn. We discovered in a "swag," a shallow, saddle-like declivity across the narrowest part of the ridge, a very scattered band of chips, not more than 25 yards in width.

The description of the collection of projectile points made by the owner suggested an Archaic occupation.

Material collected: 1 used lamellar flake and 26 chert flakes.

*Dk-2.*—Three miles northeast of Herald, State Route 652 follows the curving crest of a ridge. On the east side of the ridge, but lower than the road, is a freshwater spring, well known in the neighborhood. The only area suitable for surface collecting was a garden plot 100 yards south of the spring, and measur-

ing only 10 yards in diameter. There was no pottery to be seen anywhere. The small size of the triangular points, ordinarily associated with the ceramic horizon, suggests that this was a transient camp site used by people with a ceramic tradition.

Material studied from owner's collection and ours: 1 Clarksville Small Triangular point, 1 Madison Triangular point, 2 unclassified sidenotched points, 2 point fragments, 1 used lamellar flake, and 119 chert flakes.

### Floyd County

*Fd-1.*—Floyd County lies on the western slope of the Blue Ridge Mountains, a region containing both Oak-Chestnut and Cove Hardwood forests, while along its western political border is the boundary between the old crystalline rocks of the Blue Ridge Province and the sediments of the Allegheny Trough. All of its streams flow into New River.

The most important river northwest of the town of Floyd is Little River, one of three so-named rivers in the survey area. One of its tributaries is Simmons Creek which enters Little River from the east, 5 miles northwest of Floyd. On the east or right bank of Simmons Creek near its union with Little River a site with mixed occupation was discovered. The site is on a primary terrace 20 yards from the present bank of the creek. The surface soil is mostly deposited sand from overflow of the creek, but the plow, reaching below the sand layer, had brought up red clay and with it a group of artifacts. All the material collected was localized to an area 10 by 20 yards in size.

Material collected: 2 Type I drills, 1 Type II drill, 1 Type III drill, 1 uniface scraper, 1 used lamellar flake, 6 unbacked knives, 9 backed knives, 3 knife fragments, 1 shredder, 1 Morrow Mountain I point, 1 Bifurcated Base point, 5 unidentified points, 28 chert flakes, 62 quartz flakes, 8 quartzite flakes, 2 rhyolite flakes, 37 Radford Series sherds, 12 Grayson Series sherds, and 14 Dan River Series sherds.

*Fd-2.*—A major tributary of Little River is its West Fork. About 2.5 miles northwest of Floyd, the county seat, on the west or left bank of this West Fork stream is a flat, primary terrace of sandy soil which parallels the stream for a quarter mile. About an acre of this terrace was under cultivation at the time of my visit, and as a consequence, the only spot available for surface collecting. Both chips and potsherds were rather evenly distributed over this cultivated patch, but when compared to other sites of like nature, there were two unusual features noted. The first was that the potsherds were uniformly scattered, although thinly, and no concentrations

were encountered. When compared with the number of sherds collected, the number of chips is rather small.

Material collected: 1 unbacked knife, 1 backed knife, 2 knife fragments, 1 Clarksville Small Triangular point, 1 Levanna Triangular point, 7 chert flakes, 4 quartz flakes, 2 quartzite flakes, 1 rhyolite flake, 8 Grayson Series sherds, and 101 Dan River Series sherds.

*Fd-3.*—Across the West Fork of Little River from *Fd-2*, and 200 yards downstream is an occupied area which shows Archaic and Woodland traits. The primary terrace at this point is very narrow and traversed by a dirt road. The occupation is on the secondary terrace, close to the bank which it parallels for 40 yards, and is only 10 yards wide. The soil is a sandy clay.

Material collected: 3 backed knives, 2 knife fragments, 1 Levanna Triangular point, 1 Savannah River Stemmed point, 1 Patrick Indented Base point, 3 Potts points, 1 unidentified point, 3 unidentified large blade fragments, 29 chert flakes, 69 quartz flakes, and 1 rhyolite flake.

*Fd-4.*—This site is 150 yards downstream from *Fd-3*, which is on the same terrace formation. The landowner who showed me this site had collected from it but had dissipated his collection. It is possible the two sites, *Fd-3* and *Fd-4*, are representative of a single large occupation area but the intervening ground did not have any artifacts.

Material collected: 1 uniface scraper, 1 backed knife, 1 Savannah River Stemmed point, 1 large blade fragment, 5 chert flakes, and 19 quartz flakes.

*Fd-5.*—Northwest of Floyd, Little River runs through a narrow valley having small or nonexistent flood plains. Furthermore the land has not been greatly cultivated, being mainly forest and grassland. This site, about a half acre in size, is located 5.4 miles northwest of Floyd and about a mile west of the entrance of the West Fork of Little River, on the opposite bank. Adjacent to the river is a narrow flood plain representing the primary terrace on which the present-day dirt road has been built. Next there is an old bank of Little River surmounted by a secondary terrace of several acres in size. On this flat terrace a profusion of milky quartz chips, and artifacts suggest the site may have been of village proportions.

Material collected: 1 used lamellar flake, 5 unbacked knives, 5 knife fragments, 6 hand choppers, 1 gouge, 1 Guilford Lanceolate point, 1 Morrow Mountain I point, 6 large blade fragments, 1 Patrick Indented Base point, 1 unclassified point, 6 chert flakes, 85 quartz flakes, and 4 quartzite flakes.

*Fd-6.*—This small, thinly scattered site, whose artifact assemblage resembles *Fd-5*, is located on the

right bank of Little River one mile downstream. Like *Fd-5* it is also on a secondary terrace. It can only be interpreted as a camp site of limited duration with affinities to *Fd-5*.

Material collected: 1 unbacked knife, 1 backed knife, 2 hand choppers, 1 gouge, and 40 quartz flakes.

*Fd-7.*—A site is on the east bank of Dobbins Creek, north of its confluence with its tributary, West Fork. The plowed area has been surface hunted for years and Mr. Benton Alderman, who presently owns the farm, has a representative collection. Inspection of the site itself showed that adjacent to Dobbins Creek was a primary terrace on which pottery had been found although none was found at the time of my visit. In addition there is at least one and possibly two other terraces paralleling the creek at about 50 and 100 yards from it. On these were found points and blades, along with some chips, but no pottery.

Material collected: 1 Type I drill, 1 unbacked knife, 2 backed knives, 1 knife fragment, 1 hammerstone-millingstone, 1 Ledbetter point, 1 Pulaski point, 1 unidentified point, 1 point fragment, 37 chert flakes, and 48 quartz flakes.

## Giles County

*Gs-1.*—Brief mention of this site by John H. Reeves (1958) of Virginia Military Institute provided the initial impetus to visit it. It lies on the south bank of New River at Eggleston, on a relatively narrow primary terrace composed mainly of sand. In bulldozing sand and gravel from the middle of the terrace to build the adjacent road, burials were encountered. These, from descriptions of informants were semi-flexed, on their backs and apparently in pits. Pottery was found in the fill but not as grave goods. I did see one small, plain Radford Series pot said to have been salvaged, as well as a gorget, skull, and miscellaneous human bones.

The owner, who would allow no excavating and little trespassing, permitted Mr. Duval Williams, postmaster at Eggleston, and me to collect some material from the surface. This was mainly riverine shells and potsherds adjacent to State Route 730. I estimated the site to have been at least 100 by 30 yards in size, a large portion of it now represented by a concavity where the bulldozers were at work. Some of it had also been destroyed in making State Route 730.

Material collected: 1 hand chopper, 4 chert flakes, 24 New River Series sherds, 50 Radford Series sherds, 9 Wythe Series sherds, 1 Smyth Series sherd, 1 unclassified sherd, and subsistence remains of deer, terrapin, gastropods, and pelecypods.

Gs-2.—Mr. Duval Williams had a small collection from an Archaic site which we visited. At the time of our visit the land was just being plowed and hoed by the owner and his family. Only a ferruginous sandstone chip and a Savannah River Stemmed point were found. The site is 1.5 miles northeast of Eggleston, along the north or right bank of Sinking Creek, between the creek and the local road called Hoge's Store Road. From Mr. Williams' description the material is thinly scattered over an area of about one acre on the primary terrace of Sinking Creek.

Gs-3.—Castle Rock, the place of Henry Mercer's excavation of Thompson's Shelter (Mercer, 1894, p. 285) is a precipitous limestone cliff across New River from Pembroke. Mercer laid out a trench 10 feet, 7 inches long and 19 feet, 3 inches wide. This was then dug to a depth of 12 feet, 8 inches, revealing the following stratigraphy: the first 6 inches had charcoal, arrowheads, and glass. Pottery was found to a depth of 5 feet. Bones, though scarce, and isolated masses of charcoal went to a depth of 8 feet, 8 inches. The implication is that the last 3 feet, 8 inches were in a prepottery horizon. Howard Winters pointed out (personal communication) that this was one of the first reported excavations of an Archaic Period component in North America.

The fauna associated with the excavation is that of deciduous forest in the area: black bear, wolf, grey fox, deer, raccoon, woodchuck, squirrel, rabbit, cave rat, wild turkey, duck, land tortoise, snapping turtle, catfish, snake, riverine mussel (*Unio*), and snail (*Triodopsus*).

A visit to Castle Rock located not one but three shelters, and presumably the first to be described is Mercer's Thompson's Shelter. The railroad has cut a short tunnel through Castle Rock. Twenty-five yards from the upstream entrance to the tunnel, facing the river, is a roomy shelter with two closely spaced entrances. Internally, lateral extensions, part of a cave system, are partly blocked by fallen rocks. The floor at the entrances is relatively flat but rough from fallen, splintered limestone. Mercer could have dug into the floor just inside the opening of either entrance, but I was not able to determine the existence of his previous excavation. The material picked up on the floor of the shelter was a splinter awl, bone fragments belonging to a large mammal, turkey, fish, and a rodent. All these bones had been gnawed by rodents living in the cave.

The shelter just described, and the other two, are on the same level as the railroad. The second one is between the tunnel entrance and the cave. It is 6 feet wide, 12 feet deep, and 5 feet high. There is a fragmentary rock wall across the entrance. Two lateral tunnels lead from the main chamber but at the time

I visited they were impassable from rock fill. The floor of this shelter is somewhat concave and filled with jagged rocks of all sizes. No cultural materials were found here.

The third shelter was in use by the railroad as a storage area and had been boarded up. It was located a short distance from the upstream entrance to the railroad tunnel and measured 15 feet wide, 10 feet deep, and 4 feet high.

Gs-4.—Little Stony Creek runs through the town of Pembroke and into New River. About an acre of flat, primary terrace, 8 feet above Little Stony Creek, lies in the northern angle at the union of these two streams. This farmed plot is well known as an "Indian" site by the boys of Pembroke who have collected from here while hoeing corn or after each plowing. The sandy-loam has a very scattered chip distribution, but we were able to locate a few cultural materials. No pottery or evidence of occupation later than the Archaic Period was found.

Material collected: 1 Type III drill, 1 graver, 1 backed knife, 2 knife fragments, 1 Morrow Mountain I point, 1 Lamoka point, 1 large blade fragment, 178 chert flakes, 3 ferruginous sandstone flakes, and 1 rhyolite flake.

Gs-5.—Beneath, and also downstream from the highway bridge on the west or left bank of New River at Ripplemead, is a narrow, extended zone of occupation on the primary terrace. The zone measures 10 yards wide and 200 yards long. Artifacts and fire-cracked stones are very thinly scattered in the sandy soil of this river-scoured primary terrace. In contrast to the compact nature of some New River village sites, this one appears to have been occupied by only a few people at any one time, and then at separated loci along the length of the site.

Material collected: 1 unmodified haft drill, 1 lamellar flake scraper, 1 uniface scraper, 1 backed knife, 2 knife fragments, 1 Hamilton Triangular point, 1 Dallas Triangular point, 85 chert flakes, 2 quartz flakes, 12 New River Series sherds, and 27 Radford Series sherds.

Gs-6A, Gs-6B, and Gs-6C.—In contrast with Gs-5, this site is a circular village clearly defined by the pattern of the charcoal-stained earth. Informants said that when the secondary terrace of New River's right bank, 1.5 miles south of Pembroke, is plowed, an acre of dark stained soil, with a localized complement of artifacts, roughly circular in outline, may be seen from the higher ground to the north. This particular area had been reported to the Bureau of American Ethnology, Smithsonian Institution by Robert Wainwright (1915) and has been the subject of collecting activities by biology students and faculty from Mountain Lake Biology Station.

At the times of my three visits to this village the entire terrace was not cultivated but covered by thick grass and broomstraw. It was noted that the broomstraw did not grow in the center of the site itself, but rather in a circular pattern on the periphery, a fact which may be of archeological importance, or represent a pattern of reseeding from surrounding stock that had not been taken down by plowing. The village was defined by blanched riverine shells showing in the sandy soil between clumps of grass. In order to make a surface collection it was necessary to dig into the plow zone. This was done at widely scattered points over the entire site.

A test square was dug near the center of the village where the elevation was 8 to 12 inches higher than the remainder of the land. Debris was only 12 inches deep, without any natural separation into layers, and the subsoil was a hard, compacted tan clay. The material recovered from the square was kept separate by 6 inch levels.

The above description applies to that part of the site designated as Section "A". Southwards, toward the river, and 15 feet lower in elevation than Section A is the present flood plain which, at the times of my visits, was covered with three-foot-high wheat. Between rows of this wheat another collection was made, and believing there might be time differences between the two areas, this collection was labeled "B," and kept separate from all others. The geographical extent of the surface material in Section B is unknown, obscured by the tall wheat.

Several months after my first visits, the Norfolk and Western Railroad, in widening their right-of-way along the river side of Section A, uncovered a series of burials. At least six burials were disturbed. Two were described as fully flexed. One, a child's, had bone beads associated. These burials were located in pits fully 3.5 to 4.0 feet below the surface of the flat, secondary terrace. A collection of pottery was made from the area where the burials were found and this has been labeled Section C.

Materials collected from the surface of Section A: 11 chert flakes, 1 quartzite flake, 32 Radford Series sherds, 14 Wythe Series sherds, 5 New River Series sherds, and 1 unclassified sherd.

Excavation in Section A from the surface to a depth of 6 inches produced: 1 Levanna Triangular point, 30 chert flakes, 2 quartz flakes, 127 Radford Series sherds, 38 Wythe Series sherds, 7 New River Series sherds, 2 Smyth Series sherds, 1 Grayson Series sherd, and 2 unclassified sherds.

Excavation in Section A from 6 inches to 12 inches produced: 12 chert flakes, 1 quartz flake, 41 Radford Series sherds, 10 Wythe Series sherds, 3 New River Series sherds, and 1 unclassified sherd.

Materials collected from the surface of Section B: 1 used lamellar flake, 1 knife fragment, 1 Levanna Triangular point, 5 chert flakes, 77 Radford Series sherds, 17 Wythe Series sherds, and 1 unclassified sherd.

Materials collected from the surface in Section C: 39 Radford Series sherds and 11 Wythe Series sherds, 6 chert and 1 quartz flakes.

Each of these sections contained riverine shell and fragments of animal bone.

Gs-7.—On the right or east bank of New River, 1.5 miles southwest of Hoge's Store, a steep ridge rises from a narrow primary terrace. At the base of the ridge the railroad has been built, presumably above flood water level of the river. On the river bank there is a zone about 10 yards wide that has been swept free of all artifacts by floods. Between the sterile zone and the railroad tracks, however, a distance of 30 yards, and for 200 yards along the river, a very scattered nonpottery occupation was encountered. At the downstream end of the site, modern china, glass, and relics of a burned house were collected along with the aboriginal material.

Material collected: 104 chert flakes, 8 quartz flakes, 2 quartzite flakes, 3 unbacked knives, 2 graters, 1 uniface scraper, 3 backed knives, 2 knife fragments, 1 shredder, 2 used lamellar flakes, 1 large blade fragment, 1 projectile point fragment, 1 Guilford Lanceolate point, 2 Big Sandy Sidenotched points, and 6 unidentified points.

Gs-8.—At White Gate, Wainwright (1915) had discovered and recorded a village which he described as being 0.13 mile across, and further stated there was an alleged "burying ground" a quarter mile from it. On our second visit to White Gate to find the site, and during a steady rain, we interviewed Mr. Samuel M. Francis who not only knew about the village, but loaned 49 highly prized sherds for study. He told us that when the grass-covered bottomland, within a meander of Walker Creek, was plowed, a black circle, 2 to 4 acres in size, could be seen about 100 yards away from the encircling creek. The site is on a primary terrace, a fact made clear by being able to define both a secondary and tertiary terrace to the south and east. Presumably the "burying grounds" mentioned by Wainwright (*ibid.*) are on the tertiary terrace, but Mr. Francis' father who sought this feature was never able to locate it.

We made a collection from the village by grubbing away the rain-soaked grass from small areas and at scattered points within the confines of the village, and then trowelling through the wet, sandy soil. This collection is used in the study rather than Mr. Francis', since his collection, from the ceramic analysis, appears to be a highly selected one.

Material collected: 1 Type I drill, 26 chert flakes, 23 New River Series and 42 Radford Series sherds.

*Gs-9.*—Through the effort and consideration of Mr. Dale Collins of Pembroke, a collection of pottery and shell was obtained from a village site 2 miles upstream from Pembroke on the left bank of New River. This private collection was analyzed and is reported below, but has not otherwise been used in this study since there was no opportunity to visit and study the village.

Material collected: 1 Grayson Net and Knot Roughened sherd, 71 Radford Knot Roughened and Net Impressed sherds, 4 Radford Cordmarked sherds, 5 unclassified Radford sherds.

### Grayson County

*Gy-1.*—The first site encountered in Grayson County was on the northeast bank of New River, 3.5 miles west of Galax. It was a large village, situated on the primary terrace of the river bank, but has now been partly washed away by floods that overflow the bottomland west of the site and erode a shallow but wide channel, to the north. The area, under corn cultivation, and thus available to inspection, was 50 yards wide and 50 yards long. To the east, the ground was covered by dense sod, but it was evident the village extended in this direction.

Material collected: 1 Madison Triangular point, 1 Levanna Triangular point, 1 Type II drill, 1 steatite pipe fragment, 1 hammerstone-millingstone, 15 chert flakes, 20 quartz flakes, 5 rhyolite flakes, 1 Radford Series sherd, 1 Smyth Series sherd, 85 Grayson Series sherds, and 31 Dan River Series sherds.

*Gy-2A, Gy-2B, Gy-2C, and Gy-2D.*—A complex of four areas of Archaic occupation was delineated one mile north of Riverside on New River and east of Bog's Branch. The topographic situation is a series of ridges formed by erosion. The northern ridge trends east and west, and, running from this ridge, is a second whose crest trends north and south, forming an "L." The areas of occupation are separated by 150 to 200 yards and none of the four are presently larger than 30 yards in diameter. Taking into consideration the scatter of artifacts by plowing, the sites must have been much smaller when occupied. The western one, Section A, overlooks Bog's Branch which is 50 feet lower in elevation, and separated from the branch by a steep slope. The north area designated Section B, is at the angle of the L, east of the area called Section A, and directly south of the angle of the L are two more sites designated respectively as Section C and Section D.

Materials collected by sections are as follows: A—1 backed knife, 1 knife fragment, 1 Dallas Triangular

point, 2 Guilford Lanceolate points, 1 Savannah River Stemmed point, 3 large blade fragments, 7 chert flakes, 110 quartz flakes, and 6 rhyolite flakes. B—1 hafted scraper, 2 unbacked knives, 2 knife fragments, 1 hand chopper, 1 Savannah River Stemmed point, 1 large blade fragment, 1 chert flake, 83 quartz flakes, and 1 rhyolite flake. C—1 hafted scraper, 1 core, 1 Guilford Lanceolate point, 2 chert flakes, and 66 quartz flakes. D—1 hafted scraper, 1 unused lamellar flake, 2 knife fragments, 1 chert flake, 49 quartz flakes, 1 quartzite flake, and 1 rhyolite flake.

*Gy-3.*—Prominent rocky walls, remains of the process of erosion by New River, that are fronted by a narrow primary terrace may be seen on the south bank of this river both east and west of Moore's Creek. A series of five probable rockshelters can be seen from the bank of the river where Route 58 is located. On investigation of these probable shelters, it was found that a pothunter, using a square-nosed shovel, had preceded me. Under each rocky overhang was a square hole, dug to 12 or 24 inches, with the dirt thrown beside the hole. In only one shelter did he encounter artifacts. Potsherds had been left beside the hole. The site had been designated Gy-3. This shelter is 30 feet wide, 4 feet deep, and 6 feet high. It is 20 feet above the narrow primary terrace of New River and is west of Moore's Creek.

Material collected: 5 Grayson Series sherds.

*Gy-4.*—Between Gy-3 and Moore's Creek there is a narrow, sandy flood plain, an upstream extension of the primary terrace mentioned under Gy-3, and a fragmentary secondary terrace also. Here was found a 10 by 20 yard occupied zone associated with the dark stain of charcoal. In this area a small sample of artifacts was recovered, indicating a very limited occupation, possibly no more than one or two houses.

Material collected: 1 Madison Triangular point, 1 unidentified point, 14 chert flakes, 4 quartz flakes, 4 Grayson Series sherds, and 6 Dan River Series sherds.

*Gy-5.*—East of Moore's Creek, 50 yards from the point where it flows into New River, a small Archaic occupation site about 10 yards in diameter, was discovered. This site is on the clay subsoil, exposed by flood wash of New River, and probably represents a settlement on a secondary terrace of this river. Undoubtedly most of the debris has been taken away by floods.

Material collected: 1 graver, 1 Potts point, 1 unidentified point, 1 chert chip, and 4 quartz chips.

*Gy-6.*—Flowing from North Carolina into New River is a stream called Little River. This river is not to be confused with a stream of the same name which flows through Floyd County and also enters New



River. Nor should it be confused with the Little River that enters Clinch River in Tazewell County.

One half mile from the entrance of Little River, on the west or left bank is a small sandy bottomland, under cultivation at the time it was visited. Here was an aboriginal village that since its occupation has been subject to much erosion from river flooding, but still retains localized stains of charcoal. These are small enough to suggest pits or fireplaces. An assemblage was picked up from an area about 20 yards in diameter, although originally the village was undoubtedly much larger than this.

Material collected: 3 Type I drills, 1 biface scraper, 1 unbacked knife, 1 backed knife, 2 knife fragments, 1 Levanna Triangular point, 1 Lamoka point, 1 point fragment, 75 chert flakes, 12 quartz flakes, 12 rhyolite flakes, 4 Smyth Series sherds, 27 Grayson Series sherds, and 28 Dan River Series sherds.

*Gy-7.*—One-half mile up Little River from North Carolina, on the bank opposite from *Gy-6* is another sandy primary terrace on which a small village had been located. The owner reported that many points had been found here. This site, as with *Gy-6*, is about 20 yards in diameter.

Material collected: 1 Levanna Triangular point, 1 large blade fragment, 3 unidentifiable points, 8 chert flakes, 26 quartz flakes, and 2 rhyolite flakes.

*Gy-8.*—A third site, forming possibly a complex of small villages, was found on the opposite bank of Little River from *Gy-6* and downstream from *Gy-7*. This area was about 20 yards by 10 yards in size. However, it is well known to collectors, and this may account for the scarcity of surface finds.

Material collected: 1 Type I drill, 1 uniface scraper, 1 unbacked knife, 1 large blade fragment, 1 Morrow Mountain II point, 1 unidentified point, 7 chert flakes, 1 quartz flake, 3 rhyolite flakes, 2 Radford Series sherds, 2 Smyth Series sherds, 6 Grayson Series sherds, and 2 Dan River Series sherds.

*Gy-9.*—In contrast to the rather localized spots of occupation shown by the previous three sites, an extended village, 100 yards long and 10 yards wide, is on the left bank of the New River half way between Rood Ford and Boyer Ferry and 2.0 miles west of Baywood. The site is on an elevated terrace between the highly eroded river bank and an overflow channel which has formed inland, close to the base of hills to the southwest. Much of the village had been swept into the river and partly covered by depositional sand. Fire-cracked stones and artifacts outlined the occupation zone.

Material collected: 1 unbacked knife, 2 backed knives, 2 Madison Triangular points, 3 Levanna Triangular points, 43 chert flakes, 29 quartz flakes,

24 Grayson Series sherds, and 7 Dan River Series sherds.

*Gy-10.*—New River, south of Independence, Virginia, has cut deeply through highly schistose strata, which dip at a 70 to 80 degree angle and run in a northwest to southeast direction. Irregularities of erosion have undermined sections of strata on the north bank to produce concavities large enough to have housed a few people. Only one, about 20 feet above water level, revealed signs of occupation (Plate 2a, b).

Due to the above-mentioned strata dip, this shelter gives protection from weather only where the shelter's fan and the high angle strata meet. Upstream from this protected area is a flat, relatively wide and long fan, covered now with brush but convenient for living purposes. The fan has been partly destroyed on the south or river side of the shelter by road building, creating a 9 foot slope from road to the fan's top. Examination of the powdery humus of the surface produced four chert chips and a potsherd. From this small clue it was decided to excavate a test square, 5 by 5 feet, using a tree growing at the foot of the strata on the edge of the shelter as a datum point. The sides of Square A were aligned north-south and east-west, 4 feet from the datum point, and the levels dug in 6 inch levels.

The top 3 to 4 inches were a dry, brownish, powdery humus from decaying leaves, bark, and other vegetal remains that had not yet been reduced to humus. Below this was a black carboniferous band 1.5 inches thick across the north face of the square but increasing in thickness, steadily but irregularly, to 6 inches across the south face of the square. Below this was a uniformly greyish white sandy soil, flecked with carbon to a depth of 21 inches. This soil was filled with riverine snail shells. The bottom of the excavation was represented by flat schistose boulders lying on bed-rock. One of these was uncovered in the middle of the square one foot below the surface. It was 16 inches wide and 24 inches long, occupying a considerable volume of space. Beside the east edge of the boulder at 21 inches were three quartzite river cobbles, forming part of a hearth. The slope of the rocks at the bottom of the square was from east to west, and a pocket of debris extended to 37 inches at this point.

Believing that it might be possible to extract more information from the excavation by digging a second test by natural levels, Square B was undertaken. The plan was to use the south face of Square A on which the levels showed rather plainly as the starting point and progress to the rear of the shelter, a distance of 4 feet. The powdery humus was removed as a unit. The second level, consisting of the black, damp midden filled with shell, increased from 6 inches to 24 inches

and lay partly under an unbroken fragment of strata protruding into the shelter. Beneath this the sandy layer decreased to 3 inches at the back of the shelter, resting throughout its extent on bedrock.

Five feet east from the datum point the shelter wall at the southeast corner of Square B began to curve northwards. The southern wall of Square C was contiguous with the curving wall of the shelter. Beginning 5 feet to the north of the datum point the Square C wall overlapped 1 foot of the eastern wall of Square B. From here to the eastern wall of the shelter was 6 feet. In order that there would be uniformity between Squares A and C, Square C was dug in 6 inch levels. Furthermore, the rapid increase in thickness of the midden deposit in Square B, from 6 to 24 inches suggested piling of the midden toward the wall of the shelter either by human or natural agencies, such as flooding from New River.

The same conditions found in Squares A and B were apparent in this excavation with the exception that in the northwest corner at 28 inches from the surface a human patella was knocked loose from the north wall. It was obvious a human burial had been missed by inches in digging Square A. In order to expose the burial, an additional "square" designated "D" was dug in 6 inch levels, which was 37 inches long east and west, from the east wall of Square A, and 31 inches north and south. The burial had been placed on bed rock that sloped gently upwards so that the head was 6 inches higher than the pelvis. A single, thin sheet of schist had been placed over the head. The individual had been laid on his back, head to the east, with the feet tightly drawn to the pelvis. The flexed knees had not been compressed against the abdomen but had been pushed to the south side and lay outside the extended left arm. The right arm had been flexed at the elbow so that the hand lay near the face, which was slightly turned to the right. In the hand was a bone awl. Near the left hand were several blades of quartz which had been recovered in digging Square C at the point where the patella first appeared.

An unusual feature of the burial was the condition of the bones. A fire had been built above the burial, sufficiently close to have carbonized the skeleton from the head to the upper part of the sacrum. It did not carbonize the feet, pelvis, other than the sacrum, or leg bones. The heat of the fire was centered on the head and chest, giving a lessening effect with distance so that the sacrum's burned rim was brown while the head, ribs, right arm and hand were black.

In summary Square A was dug by 6 inch levels below the humus; Square B was dug by what seemed to be natural levels with the result there were three layers, designated for comparative purposes as follows: layer A the humus zone, layer B black midden from

6 to 24 inches deep below the humus zone, and layer C from 24 to 27 inches, ending on bedrock; Square C dug in 6 inch levels below the humus and Square D, dug to expose the burial, was dug in 6 inch levels.

Material recovered in the excavation of Square A by levels:

Level 0-3 inches: 2 unidentified points, 11 chert flakes, 3 quartz flakes, 5 Dan River Series sherds, and 22 Grayson Series sherds.

Level 3-9 inches: 4 Clarksville Small Triangular points, 1 Madison Triangular point, 1 Levanna Triangular point, 45 chert flakes, 2 quartz flakes, 2 Smyth Series sherds, 14 Dan River Series sherds, and 55 Grayson Series sherds.

Level 9-15 inches: 1 Levanna Triangular point, 1 point fragment, 1 unidentified point, 35 chert flakes, 5 quartz flakes, 4 Dan River Series sherds, and 14 Grayson Series sherds.

Level 15-21 inches: 1 Madison Triangular point, 1 large blade fragment, 1 Merom Expanding Stemmed point, 7 chert flakes, 5 quartz flakes, and 13 Grayson Series sherds.

Material recovered in the excavation of Square B by levels:

Layer A, Humus: 1 Clarksville Small Triangular point, 1 chert flake, 1 quartzite flake, 1 Dan River Series sherd, and 7 Grayson Series sherds.

Layer B, 6-24 inches: 4 Madison Triangular points, 1 point fragment, 1 unidentified point, 3 Type I drills, 1 used lamellar flake, 1 unbacked knife, 2 knife fragments, 1 microperforator, 107 chert flakes, 13 quartz flakes, 2 Smyth Series sherds, 35 Dan River Series sherds, 151 Grayson Series sherds, 1 worked bone fragment, 2 terrapin carapace bowl fragments, and 1 sherd with mica temper.

Layer C, 24-27 inches: 2 Madison Triangular points, 1 Levanna Triangular point, 1 point fragment, 1 unidentified point, 2 biface scrapers, 4 unbacked knives, 1 knife fragment, 1 hammerstone-millingstone, 1 hand chopper, 57 chert flakes, 11 quartz flakes, 1 Smyth Series sherd, 6 Dan River Series sherds, 83 Grayson Series sherds, 1 antler pin, 3 worked bone fragments, 12 sherds with mica temper, 1 steatite pipe.

Material recovered in the excavation of Square C by levels:

Level 0-3 inches, Humus: 1 Dan River Series sherd and 3 Grayson Series sherds.

Level 3-9 inches: 1 Clarksville Small Triangular point, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Hamilton Triangular point, 3 point fragments, 1 Type I drill, 1 unbacked knife, 69 chert flakes, 12 quartz flakes, 2 Smyth Series sherds, 17 Dan River Series sherds, and 68 Grayson Series sherds.

Level 9-15 inches: 1 Clarksville Small Triangular point, 2 Madison Triangular points, 1 Levanna Tri-



angular point, 1 Morrow Mountain II point, 3 point fragments, 1 unidentified point, 1 Type I-drill, 2 Type I drills, 1 Type II drill, 1 drill fragment, 2 unbacked knives, 2 knife fragments, 1 microporator, 83 chert flakes, 8 quartz flakes, 1 Smyth Series sherd, 34 Dan River Series sherds, 115 Grayson Series sherds, 2 terrapin bowl fragments, 1 splinter awl, and 3 worked bone fragments.

Level 15–21 inches: 1 Clarksville Small Triangular point, 1 Madison Triangular point, 2 Morrow Mountain II points, 1 unidentified point, 1 lamellar flake scraper, 1 biface scraper, 3 unbacked knives, 1 knife fragment, 69 chert flakes, 16 quartz flakes, 3 rhyolite flakes, 7 Dan River Series sherds, 62 Grayson Series sherds.

Level 21–27 inches: 1 Levanna Triangular point, 5 point fragments, 1 Merom Expanding Stemmed point, 1 unidentified point, 1 Type I-drill, 1 Type I drill, 5 unbacked knives, 3 backed knives, 2 knife fragments, 41 chert flakes, 88 quartz flakes, 1 rhyolite flake, 6 Dan River Series sherds, 62 Grayson Series sherds, 1 fishhook blank, 1 bone bead fragment, 1 worked bone fragment, 1 used rodent tooth, and 3 sherds with mica temper.

Level 27–33 inches: 1 large blade fragment, 1 Guilford Lanceolate point, 1 unidentified point, 1 unbacked knife, 2 knife fragments, 7 chert flakes, 6 quartz flakes, 3 Dan River Series sherds, and 1 Grayson Series sherd.

Material recovered in the excavation of Square D by levels:

Level 0–6 inches: 1 Madison Triangular point, 4 chert flakes, 1 quartz flake, and 3 Grayson Series sherds.

Level 6–12 inches: 1 Levanna Triangular point, 1 unused lamellar flake, 11 chert flakes, 6 quartz flakes, 1 Smyth Series sherd, 7 Dan River Series sherds and 11 Grayson Series sherds.

Level 12–18 inches: 1 Merom Expanding Stemmed point, 1 Type I drill, 16 chert flakes, 2 quartz flakes, 2 Dan River Series sherds, and 10 Grayson Series sherds.

Level 18–24 inches: 1 unbacked knife, 8 chert flakes, 6 quartz flakes, 11 Grayson Series sherds, 2 sherds with mica temper, and 1 terrapin carapace bowl fragment.

Level 24–27 inches: 1 large blade fragment, 1 Type II drill, 1 hafted scraper, 2 unbacked knives, 3 chert flakes, 22 quartz flakes, and 2 Grayson Series sherds.

Animal bone and riverine shells occurred in all squares.

*Gy-11.*—One mile north of the North Carolina-Virginia boundary line and 2.8 miles east of the New River bridge carrying Routes 21 and 221, a small

site with preceramic affiliations was found. The land mass slopes toward New River, 0.4 mile away. The site, about 10 yards wide and 30 yards long, is on the side of a red clay hill, and from the small amount of material recovered, undoubtedly was used only temporarily.

Material collected: 2 unbacked knives, 1 backed knife, 1 unidentified point, 5 chert flakes, 46 quartz flakes, 1 quartzite flake.

*Gy-12.*—Three-tenths of a mile east of Gy-11 a predominantly Archaic site was found on a red clay knoll which overlooked New River. The area, 30 by 40 yards in size, is centered on the top of the knoll that, toward the river, dropped off abruptly to form a steep cliff. Laterally, the soil had been eroded away with the formation of shallow gullies.

Material collected: 6 unidentified points, 1 Big Sandy Sidenotched point, 1 Saratoga Parallel Stemmed point, 4 Patrick Indented Base points, 1 Morrow Mountain I point, 2 Morrow Mountain II points, 2 point fragments, 1 Type III drill, 1 uniface scraper, 1 adze, 3 unbacked knives, 6 backed knives, 1 knife fragment, 2 hammerstone-millingstones, 55 chert flakes, 109 quartz flakes, 37 rhyolite flakes, and 3 Dan River Series sherds.

*Gy-13.*—As noted under Gy-10, rock strata trend northwest and southeast in this region. A second soapstone quarry, slightly over a mile west of Galax, was discovered, which, when aligned with Gy-8, indicates the same trend of strata of this character. Soapstone boulders are scattered on the surface, and although no specimens were found in situ, several pots which had come from this outcrop were shown by a neighboring farmer.

*Gy-14.*—Two areas of occupation, Gy-14 and Gy-15, separated by 0.2 mile are on the east or right bank of New River due west of Galax. Gy-14, downstream from Gy-15, is a mixed site about 20 yards in diameter on the secondary terrace, composed of leached clay. A small stream issuing from the hills to the east splits the site into two segments. The pottery was found closer to the river than the points and chips, suggesting an overlapping but not necessarily superposition of occupation at different time levels.

Material collected: 1 unmodified haft drill, 1 unbacked knife, 1 backed knife, 2 knife fragments, 1 Levanna Triangular point, 3 point fragments, 2 unidentified points, 34 chert flakes, 16 quartz flakes, 2 quartzite flakes, 35 rhyolite flakes, 4 Grayson Series sherds, and 3 Dan River Series sherds.

*Gy-15.*—For the general location of this site, see Gy-14. The bottomland at this site is much narrower than it is at Gy-14, and at the time of my visit was in clumps of waist-high grass, thus preventing adequate observation. It appeared to be about 75 yards long

parallel to New River and about 25 yards wide, but, as with Site Gy-14, was divided into an upstream, and downstream section by a small creek flowing onto the plain from the hills to the east.

Material collected: Section A — 1 Type I-drill, 1 unbacked knife, 1 hammerstone-millingstone, 1 point fragment, 2 Potts points, 21 chert flakes, 8 quartz flakes, 11 rhyolite flakes. Section B — 1 large blade fragment, 1 Potts point, 46 chert flakes, 22 quartz flakes, 17 rhyolite flakes. Pottery from combined Sections A and B — 14 Grayson Series sherds and 15 Dan River Series sherds.

*Gy-16.*—Broad alluvial plains are not frequent in this section of the New River but one exists 4 miles southwest of Independence, north of the river. This bottomland was in waist-high wheat and thick grass stubble so that only the sloping river bank, which was planted in corn, was available for search. No definite concentration of debris from a village could be described but the indications are that one or more villages existed here. The material collected consisted entirely of potsherds and chips, but unfortunately were misplaced and could not be classified.

*Gy-17.*—This site is recorded for its location and future exploration rather than any artifacts obtained. It lies on a plain that has been subject to flood erosion from New River, 0.5 mile south of the entrance of Bottom Creek into New River. Approximately 40 years ago a flood uncovered burials and beads, all specimens are now dissipated, except a lower jaw owned by one of the local farmers. Knowledge of this site is widespread throughout the region. When I visited the area it was in shoulder-high grass. Material said to have been collected here is recorded in the tables but not used in the study.

### Henry County

*He-1.*—A very large and important village covering 10 to 15 acres, lies on a bend in Smith River just outside the southern city limits of Martinsville. The sandy primary terrace looked like a battleground from all the randomly dug pothunter holes. Examination of the numerous holes, and the dirt thrown from them, showed that the cultural deposit was at least 4 feet deep in places. The soil is dark grey to black in color, contains numerous river snails, mussel shells, animal bones, and pottery. A good sample of pottery was obtained by visiting the holes and collecting pottery which had been abandoned by the pothunters. An undisturbed area for careful stratigraphic excavation would be hard to locate.

Material collected: 1 shaped pounder, 216 Dan River Series sherds, and riverine shells and animal bones.

*He-2.*—Another heavily pothunted village site lies on the south bank of Smith River, outside the city limits of Martinsville, and is, or was, known locally as the "Old Dominion Box Company Site" because this company had a plant next to it. I am told by Dr. Sherman Dutton, who showed me the site, that bulldozers have destroyed the site since our visit. This village was probably 20 yards wide and extended for a recognizable distance of 100 yards along the river on the primary terrace. Pottery, animal bones, snail and mussel shell were scattered through the dark, sandy soil. The pot holes indicated the depth of the deposit was at least 3 feet in places. Again, a collection of pottery was made from the cast-offs left by the pothunters, and this was supplemented by finds in the fallow cornfield on the surface. Detailed excavations may be difficult due to the disturbance from pothunters.

Material collected: 1 Type I drill, 1 clay spoon, 1 Madison Triangular point, 1 Grayson Series sherd, 201 Dan River Series sherds, 1 New River Series sherd, and riverine shells and animal bones.

*He-3.*—One and a half miles southwest of Spencer, a large village site lies on the eroded remnant of a secondary terrace 10 to 15 feet above the primary terrace of North Mayo River. It has been dug extensively by pothunters who have disturbed burials, found middens, and obtained many shells and bone artifacts. A chisel is said to have been associated with one of the burials. The area of the village appears to have been about 100 yards long, paralleling the embankment of the terrace, and to have extended an equal distance to the west, at right angles to the bank. Fragments of animal bones, some shell, considerable pottery and chips were recovered from the surface which had been planted in corn.

Material collected: 1 backed knife, 1 hammerstone-millingstone, 1 unidentified point, 1 chert flake, 21 quartz flakes, 1 quartzite flake, 19 Grayson Series sherds, 201 Dan River Series sherds, 1 New River Series sherd, and animal bones.

*He-4.*—One-half mile east of Spencer, on a hilltop at 800 feet above sea level which overlooks the entire countryside to the south and west, a village site of about 75 yards in length and 50 yards in width was discovered. North Mayo River flows to the southeast 2 miles south of the site. There were no features to be seen in the red clay composing the soil of the hilltop. Bone and shell were absent. The pattern formed by the distribution of the artifacts indicated a compacted village rather than an extended one.

Material collected: 1 core, 2 chert chips, 41 quartz chips, and 106 Dan River Series sherds.

## Lee County

*Le-1.*—The Carter Robinson Mound (Site Le-10) was covered with clover, as was all the surrounding land when we visited it. Prior to the survey Dr. Sherman Dutton had made a collection of pottery and other materials from fields immediately adjacent to Le-10. He had given me the materials which are listed below. Apparently they belonged to a village which may have been associated with the mound.

Materials collected: 1 drill fragment, 2 pottery disks, 1 clay pipe, 1 point fragment, 10 chert chips, and 30 New River Series sherds.

*Le-2.*—Wallen Creek undulates like a snake before it reaches Powell River. About 1.5 miles south of Sewell Bridge on Route 70 and on Mr. Charles Horton's property is an Archaic site of 3 to 4 acres in extent. This flat plateau, 20 feet above Wallen Creek, protrudes into one of the undulations as a finger, or as a peninsula-like projection. Chips, most frequent of the cultural detritus, are thickly scattered on the surface and Mr. Horton had collected many points, mortars, hammer-anvil stones and a sandstone(?) pipe from the site. Chips are particularly frequent about an area some 5 feet in diameter that is also charcoal-stained, and probably represents an ancient hearth.

Material collected: 1 hafted scraper, 1 uniface scraper, 1 unused lamellar flake, 3 unbacked knives, 1 backed knife, 4 knife fragments, 1 hand chopper, 1 Lamoka point, 1 Dalton point, 1 unidentified point, and 329 chert flakes.

*Le-3.*—Three miles southwest of Hunter's Gap school on the northern, primary terrace of Wallen Creek is another extensive Archaic camp site. In contrast to Le-2, this site is only 25 yards wide and parallels the creek for 150 yards. Part of the material collected was at the base of the slope of ridge rising to the north. Similar to Le-2, was the finding of a single, small area of charcoal-stained earth, presumably the remains of a hearth.

Material collected: 1 graver, 2 lamellar flake scrapers, 2 uniface scrapers, 1 biface scraper, 1 used lamellar flake, 7 unbacked knives, 17 backed knives, 17 knife fragments, 1 core, 5 hand choppers, 1 stone spokeshave, 2 shredders, 1 mortar, 1 large blade fragment, 1 Patrick Indented Base point, 2 Lamoka points, 1 Pulaski Corner Notched point, 1 unidentified point, and 492 chert flakes.

*Le-4.*—A third Archaic site on Wallen Creek, but less heavily occupied than the two preceding sites, if we judge by the debris, is 2.3 miles northeast of Hunter's Gap School. Like Le-2 it is situated on a flat plateau overlooking Wallen Creek to the north and east. The site is more extensive than the 10 by 100 yards which we searched for artifacts but the limits

could not be determined since it was partly in a tobacco field and partly in grass, and we could only see the ground between the large leaves of tobacco. In addition to material reported, a bifacially concave mortar had been found by Mr. Warren Wells who owned the land.

Material collected: 1 Bifurcated Base point, 3 unidentified points, 1 uniface scraper, 5 backed knives, 5 knife fragments, 1 core, 1 hand chopper, 2 spokeshavers, 2 shredders, and 217 chert flakes.

*Le-5.*—Slightly over a half mile south of the village of Blackwater, and approximately a fourth mile from the closest approach of Blackwater Creek, is a small site, not over 25 by 50 yards in size, from which we gathered only stone artifacts. The owner stated he had found pottery here but was unable to show us any. The occupied place is on a 3 to 5 degree slope adjacent to the flat plain of Blackwater Creek.

Material collected: 1 hafted scraper, 1 uniface scraper, 3 unused lamellar flakes, 3 backed knives, 6 knife fragments, 2 hand choppers, 1 shredder, 1 unclassifiable worked object, 1 Bifurcated Base point, 1 Lamoka point, 1 unidentified point, and 111 chert flakes.

*Le-6.*—By fortunate circumstance we were able to collect some Archaic material from a small camp site 1.5 miles northeast of Hunter's Gap School on Wallen Creek. For the past five years the primary terrace on the north side of the creek had been in grass. We arrived shortly after it had been plowed and washed by rain, and made a good collection. The area involved is no more than 20 by 75 yards, a smaller and less heavily occupied area than Le-3.

Material collected: 1 hafted scraper, 1 uniface scraper, 2 biface scrapers, 1 used lamellar flake, 6 knife fragments, 3 cores, 1 hand chopper, 1 Savannah River Stemmed point, 1 Guilford Lanceolate point, and 86 chert flakes.

*Le-7.*—Of three large mounds seen in Lee County one is 3.5 miles southeast of Rose Hill. This elliptical mound is 10 feet high, approximately 90 feet long and 60 feet wide, with the long axis in an east-west direction. It has no specific name in the minds of the people who told us about it, but it is geographically associated with Speaks Branch, which runs a few yards west of it, and with Speaks Chapel one mile to the northeast. From these associations one might properly call it the "Speaks Mound."

The history of the mound is not known. We were told that a deceased owner, Mr. Jim Sloan, would not permit digging in it, and Mrs. Marian Cheek, mother of the present owner, lives within sight of the mound and has the same strongly conservative attitude.

Speaks Mound sits on a narrow primary terrace of Speaks Branch, and abuts on the moderate ridge

which forms the southwest valley wall. At the time of our visit it was covered with grass, as was the adjacent bottomland and valley walls. Small eroded areas gave no hints as to the contents or cultural associations. No artifacts were found.

*Le-8.*—Informants described a number of "above-surface" burials of single individuals, ending their comments almost invariably with, "It (the grave) has been opened." One of the better descriptions concerned a burial "dug out" 50 to 60 years ago. It had been placed on the top of a truncated, small rounded knoll, about a mile southeast of Jonesville. The outside measurements were 8 feet long, 4 feet wide, and 2 feet high, the composition of the fill being stones and dirt. The body had been placed face down, and in the articulated state measured 6 feet 2 inches in stature. Adjacent to both sides of the head at the level of the ears were bone awls or needles (ear ornaments?). By the time of the survey the stones had been carted away, the dirt scattered, and the artifacts lost.

*Le-9.*—Known as Farley's Cave, it is said to have contained as many as 100 burials, all eliminated from archeological context by local collecting activities over many years. It is very accessible, being only a short distance west of Route 674, on the side of a valley about 2.5 miles east of Ewing. It has a wide, comfortable entrance and a shaft which descends at about a 45° angle beneath a highly crevassed roof. Within a recent date, burials have been removed from the roof by perching a step-ladder precariously from limited perches near the entrance. We saw a small triangular shell gorget said to have been associated with one of these roof burials. We collected bone from the floor near the entrance in the company of Mr. Schlie Witt who has much personal knowledge of the cave since he lives nearby. No artifacts were found, or located in collections, except as noted above.

*Le-10.*—This large mound is on the property of Mr. Carter Robinson of Ewing. It measures 10 to 12 feet high and is 120 feet in diameter, being circular in outline. It is situated on the western slope of a small hill, is constructed of black dirt which, from all appearances, was obtained from the hillside immediately to the north and east, since there is a noticeable declivity here. At the time of our visit the entire area was in thick, lush clover. No classifiable cultural material was collected (Plate 3a).

To the west of the mound is an unnamed creek. Near the banks of this creek in the neighborhood of the mound were found the artifacts cited under *Le-1*. It is not known how much, if any, digging has been done in the mound or around it but skulls are said to have been plowed up.

*Le-11.*—An accessible site known as "Cedar Hill

Cave" is about half a mile from Elydale School. It lies on the south slope of a limestone hill rising from Indian Creek. The entrance slopes downward and admits a person with ease. Fifteen feet from the entrance is a narrow opening to the right, entering a relatively broad chamber with several lateral extensions. We were able to recover some muddy human bone from the chamber's floor and from one of the extensions. These were unarticulated and fragmentary, obviously discarded by some previous visitors. It is said that shell beads have been found with these burials.

*Le-12.*—The Ely Mound, reported by Lucian Carr (1877, pp. 75-94) is two miles northeast of Ewing. The mass of the mound remains and is larger than the Carter Robinson Mound. We did no collecting or excavating here, but it is reported as a part of the survey.

It may be of some anthropological interest that we did not find a single person who had ever read Carr's description of the mound contents or the death that occurred from slumping during excavation. There was, however, an almost mythological notion current in the area that digging in a mound is attended with some fatal outcome. For some it was death by disease, but others described a garbled account similar to the actual fatal accident at Ely Mound (Plate 3b).

I visited the Peabody Museum at Harvard in hope of studying the material that Carr had recovered. Unfortunately, the collections could not be located at the time of my visit.

*Le-13.*—A newly growing cornfield on the secondary terrace of Martin Creek about 1 mile northeast of Rose Hill attracted our attention because of the possibility that an Archaic site might be present. The secondary terrace with a flat, narrow prominent plain is 10 to 20 feet above Martin Creek. There was an area of artifact concentration about 20 yards in diameter, surrounded by a peripheral zone of artifacts 30 yards wide and 150 yards long, parallel to the bank of the terrace. Since this secondary terrace is more than a mile in extent, work should produce some more sites along the terrace.

Material collected: 1 Type II drill, 1 graver, 3 hafted scrapers, 1 uniface scraper, 2 used lamellar flakes, 5 unused lamellar flakes, 14 unbacked knives, 15 backed knives, 26 knife fragments, 1 atlatl weight, 2 hand choppers, 2 shredders, 2 Lamoka points, 3 Saratoga Parallel Stemmed points, 1 Lowe Flared Base point, 6 unidentified points, and 715 chert flakes.

*Le-14.*—Mr. Morgan Edds showed us pottery and *Io fluvialis* shells that had been picked up on one of his farms. Unfortunately, much of the village area from which these items came was in tall corn. Although we became lost in the cornfield on our first visit, we were able to make a reasonably good collection on the

second try. The western segment of the site was in sod. The remainder was determined by following the contrast between charcoal-stained clay with artifacts, and reddish clay with almost no artifacts but chert chips. The site is approximately an acre in diameter. The village was circular, with discrete outlines in the blackened earth that may be individual hearths or pits.

The village is about half a mile northwest of Beech Springs, on a flattened depression. There is no large stream nearby but water is available from a spring.

Material collected: 1 uniface scraper, 1 biface scraper, 2 used lamellar flakes, 4 unbacked knives, 4 backed knives, 3 knife fragments, 1 pendant, 1 stone disk, 1 gouge, 1 Dallas Triangular point, 3 unidentified points, 448 chert chips, 101 Lee Series sherds, 29 New River Series sherds, 10 Radford Series sherds, and animal bones and riverine shells.

*Le-15.*—Two miles southwest of the confluence of Wallen Creek and Powell River there is a cave, opening onto gently sloping step-like limestone strata. The opening requires an entrant to slide on his stomach down a muddy incline. Around the entrance were the screen and screenings of dirt hauled by rope and bucket from the interior. Mr. Edds said he had obtained beads and "buttons" (one-inch-wide shell disks) from this cave, and we were able to collect human bones that had been discarded. The cave is on the property of a Mr. Unthank.

*Le-16.*—A mile southwest of Unthank Cave is Bone Cave, so called from all the human bones which have been taken from it. We were not able to visit this cave, but it is listed here for future reference.

*Le-17.*—Two strata cuts were dug in a village half a mile west of Halls Ford. It is located on a lofty plateau bounded by a U-shaped loop of the Powell River. The site lies on the narrowest part of the plateau. The southern extremity of the site is an abandoned road leading to White Shoals. The main section of occupation which during our several visits was covered with wild mustard, is identified by black soil, shell, chips, and pottery.

Cut A was dug near the southwestern edge. Black soil and debris were uniformly intermixed to a depth of 16 inches, at which point the sterile, reddish clay subsoil was exposed and occupational evidence terminated. Cut B was placed 25 yards north and slightly east of the first cut at the center of a noticeable rise. Charcoal, chips and shell were found in minor lenses with poor definition to 24 inches below the surface. Samples of charcoal for carbon-14 dating were collected in aluminum foil from each 6-inch level. At the 24-inch level a pavement of 2-inch thick weathered limestone slabs covered most of the floor of the excavation, extending into neighboring areas at the same

level. One slab, in the center of our five foot square, was standing on edge, reaching from the 12- to 24-inch levels. Beneath the pavement there was another 2-inch layer of black fill resting on the reddish clay subsoil which we had encountered in Cut A.

The Smithsonian Institution's Radiation Biology Laboratory dated charcoal from Cut B, Level 18-24 inches, at A.D.  $1210 \pm 120$  years (SI-131).

Material collected from the surface: 1 drill fragment, 2 used lamellar flakes, 1 unused lamellar flake, 3 unbacked knives, 7 backed knives, 2 knife fragments, 1 celt, 1 unclassifiable worked object, 4 point fragments, 239 chert flakes, 93 Lee Series sherds, 102 New River Series sherds, 1 Radford Series sherd, and 1 perforated *Leptoxis subglobosa* shell.

Material excavated from Cut A by levels:

Level 0-6 inches: 1 Type I-drill, 1 uniface scraper, 1 used lamellar flake, 2 unbacked knives, 1 unclassifiable worked object, 1 Dallas Triangular point, 362 chert flakes, 30 Lee Series sherds, 29 New River Series sherds, and 2 Radford Series sherds.

Level 6-12 inches: 1 Type II drill, 1 hafted scraper, 1 uniface scraper, 1 unused lamellar flake, 1 backed knife, 1 knife fragment, 1 clay pipe, 2 unclassifiable worked objects, 1 point fragment, 1 unidentified point, 417 chert chips, 46 Lee Series sherds, 38 New River Series sherds, and 1 perforated *Leptoxis subglobosa* shell.

Level 12-18 inches: 1 unbacked knife, 118 chert flakes, 14 Lee Series sherds, and 4 New River Series sherds.

Material excavated from Cut B by levels:

Level 0-6 inches: 212 chert flakes, 2 Lee Series sherds, and 9 New River Series sherds.

Level 6-12 inches: 1 Type II drill, 1 stone disk, 1 pottery disk, 2 unclassified worked objects, 1 point fragment, 234 chert chips, 1 Lee Series sherd, and 13 New River Series sherds.

Level 12-18 inches: 1 Hamilton Triangular point, 1 unclassified worked stone item, 224 chert flakes, 1 New River Series sherd, and 1 Wythe Series sherd.

Level 18-24 inches: 1 unclassified worked object, 254 chert flakes, 1 Lee Series sherd, and 4 New River Series sherds.

Level 24-30 inches: 1 used lamellar flake, 2 unclassified worked stone objects, 330 chert flakes, and 2 New River Series sherds.

Riverine shells and animal bones were found on the surface and in the excavations.

*Le-18.*—We were prevented from obtaining anything except a few chips at this site by the lack of proper permission for scientific collecting from the present property owner. We did see a collection of points, and inspection of the ground showed a profusely scattered chipping area, of unknown extent,

belonging to an Archaic campsite. The site is a little over 2.5 miles northwest of Jonesville, on high ground, 0.1 mile from Sugar Creek.

Material collected: 20 chert flakes.

*Le-19.*—Approximately 1.5 miles southeast of Dryden, the Powell River has a well-defined secondary terrace midway between the river and the intersection of Routes 642 and 619, the latter crossing the river, the former paralleling it. On this terrace for 50 yards on both sides of Route 619, from the edge of the bank inland for 10 yards, is an Archaic Period site. Chert chips were rather thickly scattered and, besides the material we collected, we saw a private collection with projectile points, fragments from steatite vessels and a mano.

Material collected: 1 graver, 2 hafted scrapers, 1 biface scraper, 2 used lamellar flakes, 1 unused lamellar flake, 1 unbacked knife, 3 backed knives, 4 knife fragments, 1 core, 1 hand chopper, 1 shredder, 1 large blade fragment, 1 point fragment, 1 unidentified point, and 268 chert flakes.

*Le-20.*—On the north bank of Powell River just across the Lee-Wise County Line a small Archaic chipping site was found on the river's secondary terrace. The chips were scattered, and no other artifacts were found, suggesting temporary occupancy.

Material collected: 49 chert flakes.

### Montgomery County

*My-1.*—Systematic surveying of New River began at Claytor Lake Dam and proceeded downstream along the right bank. Thinly scattered evidence of occupation was found first on a secondary terrace about 1.0 mile from the dam over an area of 10 by 20 yards. In addition to the collected material, there were fire-cracked quartzite cobbles and staining of the sandy-clay soil with charcoal. Erosion had removed all traces of occupancy from the northern end and, since the secondary terrace is only 6 to 8 feet above the primary, it undoubtedly has suffered from previous New River floods.

Material collected: 1 graver, 1 biface scraper, 1 hand chopper, 1 Madison Triangular point, 1 Levanna Triangular point, 1 point fragment, 59 chert flakes, 25 quartz flakes, 4 rhyolite flakes, and 1 Wythe Series sherd.

*My-2.*—Three and a half miles south of Radford there is a large alluvial plain known as Ingles Bottom. In this area Mary Ingles was captured by Indians in the 18th century and taken subsequently to Ohio. Mary Ingles, six times removed, now Mrs. Melton Jeffries, owns the land and lives in a home which overlooks this historic spot.

There are at least three occupations here. On a slope rising from the flood plain and the most distant from New River, Mrs. Jeffries described finding artifacts without ceramic association, thus leading me to believe this was the site of an Archaic settlement. No collection was possible because of pasturage. The second occupation zone is a concentrated village that has been described previously (Holland, 1948; Evans, 1955, p. 18) and has been designated as a separate site, My-11 (p. 22).

The third occupation in Ingles Bottom is referred to as My-2. It is within 10 yards of the river, covering an area 30 yards wide, and extending 100 yards parallel to the river on the present flood plain. Scattered ceramics, flakes, stone artifacts, and fire-cracked stones are in evidence. This area is downstream from Site My-11 and lacks the intense, highly concentrated occupation character of My-11, which is on higher ground of the fragmentary secondary terrace.

Material collected: 1 lamellar flake scraper, 1 unbacked knife, 1 hammerstone-millingstone, 1 core, 1 shredder, 1 pottery disk, 1 Madison Triangular point, 4 Levanna Triangular points, 1 point fragment, 1 unidentified point, 57 chert flakes, 47 quartz flakes, 1 quartzite flake, 1 Grayson Series sherd, 5 New River Series sherds, 103 Radford Series sherds, 1 unclassified sherd, and 34 Wythe Series sherds.

*My-3.*—When plowed in the spring, a blackened acre of land may be seen sloping upwards from the primary plain of the right bank of New River, a short distance downstream from the Route 11 bridge at Radford. This large village is well known to Radford collectors who told me burials have been washed out of the primary terrace by floods. Village debris is associated with, and fairly well limited to, the blackened soil. A few glass fragments and some modern glazed ceramics were collected along with the aboriginal material, probably representing refuse from the modern city around it (Plate 4a).

Material collected: 1 graver, 1 uniface scraper, 1 unbacked knife, 1 backed knife, 2 hammerstone-millingstones, 2 cores, 1 unclassifiable worked stone object, 2 Clarksville Small Triangular points, 4 Madison Triangular points, 93 chert flakes, 29 quartz flakes, 7 quartzite flakes, 2 unclassified flakes, 18 New River Series sherds, 114 Radford Series sherds, 1 Smyth Series sherds, 128 Wythe Series sherds, and riverine shells and animal bones.

*My-4A and My-4B.*—The most outstanding characteristics of this site are its scattered and extended nature, and its position along New River 1.0 mile north from Radford, with Route 114 forming a boundary between this site and My-5. Material came from a recently planted cornfield, well washed by rain so that inspection of the ground was unimpeded.



There were no charcoal stains, and artifacts were thinly scattered in a band 300 yards long and 10 to 30 yards wide. Only pottery, flakes, a few worked stone items, and an occasional fire-cracked stone were found. The site itself is on a secondary terrace with a drop-off to the primary terrace of 4 to 6 feet. At the edge of the secondary terrace there is a 10-yard wide artifact-free belt. This zone resulted from erosion by high waters, which probably reduced the artifact content on the secondary terrace. The primary terrace was sterile.

In order to study the problems of adequate sampling by zones, this long site was divided into two approximately equal halves: the upstream area was designated as My-4A, the downstream one as My-4B. In the final analysis, however, no distinction in time or cultural relationships developed.

Material collected from My-4A: 2 cores, 1 unclassified worked stone object, 3 Levanna Triangular points, 1 unidentified point, 227 chert flakes, 31 quartz flakes, 1 quartzite flake, 28 Grayson Series sherds, 28 Wythe Series sherds, 10 New River Series sherds, 3 unclassified sherds, and 80 Radford Series sherds.

Material collected from My-4B: 1 backed knife, 1 core, 1 unclassifiable worked stone object, 1 Madison Triangular point, 30 chert flakes, 8 quartz flakes, 2 quartzite flakes, 4 Grayson Series sherds, 2 New River Series sherds, 14 Radford Series sherds, and 6 Wythe Series sherds.

*My-5.*—Route 114 from Radford divides the long alluvial plain on which My-4 is situated into two unequal parts. The upstream section of this plain was studied as Site My-4 and the downstream section has been designated as My-5. The major distinctions of this latter site are the 8 to 12 foot higher bank of the secondary terrace, a concentration of debris, and lesser evidence of erosion on the river side. At the point of artifact concentration I was able to take advantage of an excavation for a basement to observe the possibility of subsurface features in the very sandy soil. None was found.

Actually, this long alluvial plain has been divided into three parts (My-4A, My-4B, and My-5) on the possibility there would be some differences between the three sections. My-5 shows very close affinities with My-4A and My-4B.

Material collected: 2 Type II drills, 3 unbacked knives, 1 backed knife, 2 knife fragments, 5 hammerstone-millingstones, 1 clay pipe, 1 unclassifiable worked stone object, 1 Clarksville Small Triangular point, 2 Madison Triangular points, 1 Levanna Triangular point, 1 Morrow Mountain II point, 1 Bifurcated Base point, 2 point fragments, 1 Wheeler Excurvate point, 1 unidentifiable point, 48 chert

flakes, 18 quartz flakes, 13 New River Series sherds, 51 Radford Series sherds, and 34 Wythe Series sherds.

*My-6.*—Near Whitehorn, about 40 to 50 years ago, in the course of installing a railroad culvert, an Indian skeleton was unearthed. According to Mr. Cal Albert of Whitehorn, an eyewitness, the skeleton had been interred in a standing position. For want of a better idea, the bones were thrown aside and consequently lost.

Downstream from this culvert, adjacent to the railroad on the New River side, is a thinly scattered occupation zone 400 yards long and 10 yards wide. The entire band of occupation lies on the secondary terrace, 20 feet or more above the river. The primary terrace has been swept clean.

Material collected: 1 unbacked knife, 1 core, 1 unclassified worked object, 3 Madison Triangular points, 4 Levanna Triangular points, 1 large blade fragment, 1 Perkiomen Broad Spear point, 3 point fragments, 1 unidentifiable point, 130 chert flakes, 19 quartz flakes, 1 quartzite flake, 1 ferruginous sandstone flake, 4 New River Series sherds, 14 Radford Series sherds, 2 Smyth Series sherds, 28 Wythe Series sherds, and 1 unclassified sherd.

*My-7.*—There are at least two large villages on the sprawling Hercules Powder Company property, also known as the Radford Arsenal, at "Horseshoe Bend" in New River. In order to examine them it is necessary to have security clearance and be accompanied by a watchful guard. The village site marked My-7 is on the south or left bank not far from the mouth of Stubbles Creek on the opposite side of the river. I could not make out the various river terraces, but probably the site is on the primary. A bulldozer had been used to dig a trench parallel to the river and directly through the site, piling the dirt and village debris on the river side of the trench. Also, an erosional gully was worn into the village at right angles to the bulldozer trench. Inspection of these features indicated a site with at least 3- to 4-foot depth in the black sandy soil, and covering an area at least 300 yards long and 50 yards wide.

Material collected: 1 Type I drill, 1 hafted scraper, 1 unbacked knife, 2 hammerstone-millingstones, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Patrick Indented Base point, 1 unidentifiable point, 1 chert flake, 1 New River Series sherd, 137 Radford Series sherds, 7 Wythe Series sherds, and riverine shells and animal bones.

*My-8.*—This is one of several aboriginal sites that suggest selection of terrain for defensive purposes. The village, marked by black soil filled with village debris, is 100 yards in diameter, and fits into a bend on the secondary terrace of Roanoke River, north of Ellett, so that three sides are elevated by a sharp, continuous

embankment. The north, west, and south sides are 15 to 25 feet higher than the surrounding land, leaving only the east side for direct approach on ground of comparable elevation.

Material collected: 1 Type I drill, 1 unbacked knife, 1 core, 1 clay pipe, 3 unclassifiable worked objects, 2 Levanna Triangular points, 1 Dallas Triangular point, 1 Savannah River Stemmed point, 2 Morrow Mountain II points, 2 unidentifiable points, 29 chert flakes, 26 quartz flakes, 2 quartzite flakes, 1 Grayson Series sherd, 8 New River Series sherds, 156 Radford Series sherds, 1 unclassified sherd, 1 Smyth Series sherd, 1 terrapin bowl fragment, 1 piece of cut bone, and numerous animal bones and riverine shells.

*My-9.*—While examining *My-8*, my elevated position gave me visual command of freshly plowed land across Roanoke River to the west. About 300 yards from the river there was an area remarkable for soil contrast. The wide primary plain is reddish clay, and imposed on this is a rectangle, 200 yards in greatest length, and 100 yards wide of dark black stain. This black soil contained cultural debris, and was 6 to 10 inches higher than the surrounding red clay flood plain.

Material collected: 1 unclassifiable worked stone object, 1 Levanna Triangular point, 1 point fragment, 1 Halifax Sidenotched point, 14 chert flakes, 8 quartz flakes, 2 Grayson Series sherds, 2 New River Series sherds, 53 Radford Series sherds, 11 Wythe Series sherds, and 4 unclassified sherds.

*My-10.*—On the flat, secondary terrace of the east bank of the Roanoke River about midway between Luster's Gate and Ellett is a thinly scattered Archaic site. The embankment leading from the primary to secondary terrace is 30 feet high. There are about 2 acres over which this aboriginal evidence is scattered.

Material collected: 1 uniface scraper, 1 unbacked knife, 4 large blade fragments, 35 chert flakes, 22 quartz flakes, 52 quartzite flakes, and 3 ferruginous sandstone flakes.

*My-11.*—This site has already been mentioned under *My-2* (p. 20). Surface collection had been made and reported in previous reports (Holland, 1948; Evans, 1955, pp. 18, 105). The site is on an eroded secondary terrace, is circular in outline and about 50 to 60 yards in diameter. A 5 by 5 foot strata cut was made in about the middle of the village in arbitrary 6-inch levels. The top 6 inches clearly showed the effects of plowing as the potsherds were broken into smaller fragments than those lower in the cut. No prepared storage pits were encountered at any level, but intruding into the cut were numerous lenses of charcoal which represented fireplaces in the surrounding area. At 18 inches an irregular collection of rocks associated with charcoal and riverine snail shells

had obviously been a fireplace. A postmold was found at 12 inches but was not associated with any others in the excavation.

The midden soil is black and sandy. Throughout the depths of the cut, which went to 46 inches, there are lenses of shell, and it appeared that the numbers of riverine snail decreased from top to bottom. The subsoil is yellow sand and protruded irregularly into the cut at all levels.

A charcoal sample from the 18–24-inch level was dated by the Radiation Biology Laboratory of the Smithsonian Institution as A.D. 1250  $\pm$  120 years (SI-329).

Material collected is reported by each level in the excavation.

Level 0–6 inches: 1 unbacked knife, 1 core, 1 pottery disk, 1 unidentified point, 2 point fragments, 49 chert flakes, 24 quartz flakes, 5 quartzite flakes, 884 Radford Series sherds, 137 Wythe Series sherds, 16 New River Series sherds, 2 Grayson Series sherds, and 1 worked fragment of bone.

Level 6–12 inches: 1 Type I-drill, 1 Madison Triangular point, 34 chert flakes, 21 quartz flakes, 2 quartzite flakes, 381 Radford Series sherds, 55 Wythe Series sherds, 4 New River Series sherds, 1 Grayson Series sherd, 3 deer ulna awls, 3 terrapin carapace bowl fragments, 1 splinter awl, and 1 small bone bead.

Level 12–18 inches: 1 unbacked knife, 1 Levanna Triangular point, 25 chert flakes, 9 quartz flakes, 103 Radford Series sherds, 16 Wythe Series sherds, 27 Grayson Series sherds, 11 New River Series sherds, 1 splinter awl, 1 beaver incisor tool, 1 bone bead, 1 worked bone fragment, and a partly worked deer distal phalanx.

Level 18–24 inches: 1 Hamilton Triangular point, 1 Dallas Triangular point, 1 unclassified point, 15 chert flakes, 9 quartz flakes, 107 Radford Series sherds, 4 Grayson Series sherds, 3 Wythe Series sherds, 1 terrapin carapace bowl fragment, 1 splinter awl, and 2 worked bone fragments.

Level 24–30 inches: 46 Radford Series sherds, 12 Wythe Series sherds, 1 deer antler awl, and 1 turkey leg bone awl.

Level 30–36 inches: 1 Dallas Triangular point, 10 chert flakes, 1 quartz flake, 6 quartzite flakes, 1 Grayson Series sherd, 19 Radford Series sherds, and 22 Wythe Series sherds.

Level 36–46 inches: 1 point fragment, 13 Radford Series sherds, 9 Wythe Series sherds, and 1 splinter awl.

In each level there were numerous riverine shells and animal bones.

*My-12.*—East of Meadow Creek, 4 miles south of Radford, an Archaic site was discovered on the slope



of a ridge rising from the creek. Measuring about 20 degrees from the horizontal, the slope did not appear to have been suitable for habitation, but there was no evidence that material had washed down from above. The whole hillside had been planted the year before in corn and the fallow field had been washed by winter rains, making conditions for surface collecting and examination very good.

Material collected: 1 Morrow Mountain II point, 1 unbacked knife, 33 chert flakes, and 7 quartz flakes.

*My-13.*—The small community of Snowville is concentrated in the valley of Little River that flows from Floyd County. East of Snowville is a precipitous slope, 100 to 150 feet above the river, topped by two acres of flat land, presently under cultivation. At the time of the survey it was planted in corn and had been washed by recent rains. The aboriginal material was scattered over this flat section up the edge of the bluff, covering the entire area. North of the site the land continues to rise until it crests at about 2000 feet above sea level. In the study of the positions of sites with reference to terrain, this site would be designated as a "bluff site."

Material collected: 1 graver, 1 hafted scraper, 2 uniface scrapers, 1 used lamellar flake, 2 unused lamellar flakes, 1 backed knife, 7 knife fragments, 1 core, 1 hand chopper, 1 gouge, 1 unclassified worked item, 2 Madison Triangular points, 1 Levanna Triangular point, 3 Guilford Lanceolate points, 2 Savannah River Stemmed points, 3 large blade fragments, 2 Bifurcated Base points, 1 Patrick Indented Base point, 1 Hardaway Sidenotched point, 3 unidentifiable points, 179 chert flakes, 62 quartz flakes, 13 quartzite flakes, and 2 other flakes.

*My-14.*—In contrast to the highly elevated, bluff position of *My-13*, this small site is on the bank of Little River, close to Snowville. The littered zone is only 10 yards wide and an equal distance back from the river. The small artifact assemblage was due in part to flood wash.

Material collected: 8 chert flakes and 3 quartz flakes.

*My-15.*—A very thinly scattered site on the northwest or right primary terrace of Little River was found a half mile southeast of Snowville. The site is 25 by 75 yards in observable limits with the length of this rectangular area at right angles to the axis of the river. Undoubtedly the site is larger than the dimensions given here, but crop cover made the area difficult to study. Artifacts of several time periods were found.

Material collected: 1 gouge, 1 Levanna Triangular Point, 2 Savannah River Stemmed points, 7 chert flakes, 7 quartz flakes, 25 Radford Series sherds, and 5 Wythe Series sherds.

*My-16.*—About 0.2 mile upstream from *My-15*, on the same side of Little River and directly on its bank, a very thinly scattered Archaic site was found in the sandy clay soil. It is no more than 10 yards wide and 25 yards long, parallel to the river.

Material collected: 1 backed knife, 1 Guilford Lanceolate point, 1 Savannah River Stemmed point, 1 unidentifiable point, 57 chert flakes, 13 quartz flakes, and 7 quartzite flakes.

*My-17.*—One-tenth mile downstream, and on the opposite side of Little River from *My-15*, a widely scattered site with a mixed occupation was encountered. The area of occupation is only 10 yards wide but follows the river for 75 yards on top of the primary terrace.

Material collected: 1 unbacked knife, 1 core, 1 Pulaski Corner Notched point, 9 chert chips, 9 quartz chips, 3 quartzite chips, 2 Radford Series sherds, and 4 Wythe Series sherds.

*My-18.*—Seven miles south of Radford on a secondary terrace of a large alluvial plain, formed by Little River coming from Floyd County, a band of occupation refuse is parallel to the river suggesting an extended village. The band of occupation was only 10 yards wide and 100 yards long. The soil was extremely sandy and of a greyish color. The material was difficult to locate between clumps of high grass interspersed with rows of corn.

Material collected: 1 used lamellar flake, 1 unbacked knife, 1 large blade fragment, 1 point fragment, 1 Potts point, 7 chert flakes, 8 quartz flakes, 2 quartzite flakes, 1 unclassified flake, 2 Grayson Series sherds, and 18 Radford Series sherds.

*My-19.*—A thickly littered Archaic site was discovered on the summit of a flat, plateau-like ridge 10.0 miles south of Radford. Little River from Floyd County flows north at this point and is approximately one-tenth mile away. Part of the site has been torn away in the construction of a state route, but there is an area 50 yards in diameter left for study.

Material collected: 2 uniface scrapers, 1 unbacked knife, 2 backed knives, 1 knife fragment, 2 cores, 2 hand choppers, 1 shredder, 1 Savannah River Stemmed point, 1 large blade fragment, 1 Patrick Indented Base point, 1 Stanley Stemmed point, 2 unidentifiable points, 74 chert flakes, 37 quartz flakes, and 50 quartzite flakes.

### Patrick County

*Pk-1.*—South Mayo River forms the southern town limits of Stuart, the county seat of Patrick County. Two hundred yards north of South Mayo River, at the southeastern corner of the town, is a partly destroyed site from road building, which went directly through the site. Grading toward the river by a lumber

company in completing its entrances also destroyed part of Pk-1. Although known to local collectors for many years, there are still artifacts eroding out of the northern bank of the road. The sample is a mixture of a Woodland Period and an Archaic Period complex. This site is located in the sandy clay soil of a secondary terrace. Investigation of the primary terrace indicated no evidence of Indian occupancy.

Material collected: 1 hafted scraper, 3 backed knives, 1 Morrow Mountain I point, 1 Clarksville Small Triangular point, 12 chert flakes, 11 quartz flakes, 2 Grayson Series sherds, 17 Dan River Series sherds, and 1 Radford Series sherd.

*Pk-2.*—Two sites, within a hundred yards of one another, but sharply divided geographically, are to be found 1.5 miles northeast of Stella on the north side of North Mayo River. The smaller site is designated Pk-3. The larger, Pk-2, covers 3 to 4 acres on a plain adjacent to the river but, so far as could be discerned, the village was located, not on the river bank but 150 to 200 yards from the present channel. This area is scattered with potsherds, has localized concentrations of black soil 3 to 4 feet in diameter, indicating pits. The owner stated burials had been plowed up, and probably one or two had been dug from these midden areas. He indicated the depth of some of these middens, or pits, was 2 to 4 feet.

Material collected: 1 used lamellar flake, 1 stone disk, 1 Patrick Indented Base point, 2 chert flakes, 39 quartz flakes, 1 Grayson Series sherd, 193 Dan River Series sherds, and 1 New River Series sherd.

*Pk-3.*—East of Pk-2 and separated from it by a sharp 20 to 30 foot bluff, is Pk-3. Material from the site spills over the edge of the embankment, and within the not-too-distant past, the wooded mesa-like area was used as a cemetery for slaves. Pothunters, without permission of the owner, have dug into the compact clay without finding any depth to the deposit. One unique feature of the site was the use of brown jasper to make Madison Triangular projectile points. The village, as well as can be outlined in the woods, was probably 50 by 50 yards in size.

Material collected: 1 hammerstone-millingstone, 1 Madison Triangular point, 59 chert flakes, 17 quartz flakes, 23 Grayson Series sherds, 254 Dan River Series sherds, and 5 New River Series sherds.

*Pk-4.*—One mile west of Stuart, 150 feet from the southwest bank of South Mayo River, a camp site was on a small plain sloping to the river. The material was scarce, indicating there was only brief occupation at best, and was scattered over an area 20 yards in diameter.

Material collected: 1 Guilford Lanceolate point, 2 backed knives, 1 hand chopper, 2 chert flakes, 24

quartz flakes, 1 rhyolite flake, and 12 Dan River Series sherds.

*Pk-5.*—A large amount of Archaic village debris has been collected during the past 40 years from an acre plot, 40 feet higher than South Mayo River, and midway between it and Poorhouse Creek. This point is a half mile southwest of Stuart, and locally the two streams, which unite east of the site, are known as the North and South Mayo Rivers. The site is one-tenth mile from the nearest approach of both streams. At the time of my visit the land had not been plowed, but was in grass and not suitable for collecting. As a consequence only a small sample was recovered.

Material collected: 1 unclassifiable worked stone, and 7 chert flakes.

*Pk-6.*—A small village was discovered a half mile north of the North Carolina-Virginia boundary and 10.5 miles southwest of Stuart, on the south bank of Dan River. At this point a small unnamed creek runs into Dan River, and the village had been placed 25 yards from the Dan on the east bank of this stream. It was not more than 50 yards in diameter with only a small amount of widely scattered debris. It appears to have been established on a secondary terrace of Dan River.

Material collected: 3 chert flakes, 7 quartz flakes, 4 Grayson Series sherds, and 19 Dan River Series sherds.

*Pk-7.*—An extended village, 150 yards long, parallel to the east side of North Mayo River, and 25 to 30 yards wide, was found 1.25 miles northeast of Stella. The village had been located on a secondary terrace composed of clay soil, 2 to 3 feet above the sterile sandy primary terrace. Pottery and chips were widely scattered, with a tendency to cluster in specific small loci that might indicate house refuse. The paucity of flakes and points is a notable feature, not only of this site, but others on the North Mayo River.

Material collected: 1 Madison Triangular point, 1 Morrow Mountain II point, 1 chert flake, 18 quartz flakes, and 11 Grayson Series sherds.

*Pk-8.*—Three separate village locations were found 3.5 miles north of Stella on the North Mayo River. This one was the most inland from the river on a well-defined tertiary terrace, 3 to 4 feet above the secondary terrace. In contrast to Site Pk-7, the village appears to have been a compact settlement some 50 yards in diameter as outlined by the artifacts, but has no charcoal staining of the clayey soil.

Material collected: 7 chert flakes, 32 quartz flakes, 1 quartzite flake, 57 Dan River Series sherds, 26 New River Series sherds, and 3 Radford Series sherds.

*Pk-9.*—Directly south of Pk-8, on the secondary terrace of North Mayo River, an irregularly shaped village was outlined by dark charcoal stained soil

50 to 75 yards in diameter. It was a compact village, however, placed 150 to 200 yards from the bank of the river.

Material collected: 1 unbacked knife, 1 backed knife, 2 knife fragments, 1 pottery disk, 1 Madison Triangular point, 1 point fragment, 1 unidentifiable point, 6 chert flakes, 36 quartz flakes, 2 Grayson Series sherds, 136 Dan River Series sherds, 1 New River Series sherd, and 1 Radford Series sherd.

*Pk-10.*—It is possible that Sites Pk-9 and Pk-10 represent a single village, or two distinct occupations. Pk-10, north of Pk-9, was also a compact village, as judged by the dark stained soil, but was separated from Pk-9 by a sterile interval of 100 yards, which also showed no charcoal staining of the ground. This village was 75 yards in diameter, located on the secondary terrace 150 to 200 yards from Mayo River.

Material collected: 1 knife fragment, 1 point fragment, 5 chert flakes, 4 quartz flakes, and 132 Dan River Series sherds.

*Pk-11.*—Three Fork Mill on Little Dan River is a mile northeast of a ridge that is covered with highly leached soil, and is at an elevation of 1500 feet. The Archaic site on the ridge lies in a shallow gully that has been more eroded than the continuation of the same ridge on either side of it. A few artifacts were found over an area of 10 by 50 yards in an old tobacco field whose stubble still remained.

Material collected: 1 used lamellar flake, 1 backed knife, 2 large blade fragments, 23 chert flakes, 26 quartz flakes, 2 rhyolite flakes, and 1 Dan River Series sherd.

*Pk-12.*—An erosional remnant, consisting of a conical hill, 20 feet high separates this small Archaic site from Pk-11. The distance between the two is 100 yards. A fragment of a soapstone bowl plus the following artifacts were picked up on the surface at this point.

Material collected: 2 large blade fragments, 8 chert flakes, and 17 quartz flakes.

*Pk-13.*—This Archaic site is on a ridge near Pk-11 and Pk-12. It differs from them in having a quartz-using complex, and contrasts also in the artifact assemblage. The occupation was along the crest of the ridge for a distance of 25 yards, and is not more than 10 yards wide. The slope of the ground is directly toward the Little Dan River, three-quarters of a mile to the east.

Material collected: 1 unbacked knife, 1 backed knife, 3 Guilford Lanceolate points, 4 Patrick Indented Base points, 1 unidentified point, 13 chert flakes, 38 quartz flakes, 1 quartzite flake, and 2 rhyolite flakes.

*Pk-14.*—One and a half miles north of the North Carolina-Virginia line on the west bank of Little Dan

River, the blackened soil on a primary terrace outlines the occupation of the site. Pottery and chips were discovered over an area of 40 by 50 yards about 50 to 100 yards from the river. While this is obviously a village site, the darkened soil is not entirely due to human activity with fires. Careful inspection of the undercut river banks on both sides of Little Dan River shows that peat is, in all probability, the major cause of the soil change.

Material collected: 1 point fragment, 2 chert flakes, 12 quartz flakes, 5 Grayson Series sherds, and 39 Dan River Series sherds.

*Pk-15.*—In Kibbler Community in western Patrick County several ceramic-bearing sites are well known. The largest was covered by waist-high wheat and could not be examined at the time of my visit. On the southwestern side of Dan River a very scattered occupation site, fronting on the river, produced a small artifact assemblage. The primary terrace is composed entirely of sand, and the zone of occupation was 75 yards long and 10 yards wide.

Material collected: 1 chert flake, 6 quartz flakes, and 1 Grayson Series sherd.

*Pk-16.*—Two and a half miles northwest of Nettle-ridge on the southwestern side of Route 58 a low erosional, flat-topped ridge borders on a small unnamed creek whose flow is now subject to the weather. If it rains, it has water; if not, it is dry. On this flat surface, composed of leached clay, is an Archaic campsite about 25 yards in diameter.

Material collected: 1 backed knife, 1 core, 1 Guilford Lanceolate point, 1 Patrick Indented Base point, 1 point fragment, 1 chert flake, and 40 quartz flakes.

*Pk-17.*—Mr. Moir Bingman of Critz had discovered during cultivation on the north bank of Mill Creek a black circle associated with pottery which he rightly considered to be an aboriginal village. The area of dark soil, 10 by 20 yards, is on an unleached, red-clay secondary terrace of the creek. He had dug many holes there, hoping to find burials but had been unsuccessful. He also dug several holes while I was with him, and at the places he dug, the dark soil extended downwards 12 to 18 inches. The site is about 2 miles east of Critz.

Material collected: 1 Riverton Stemmed point, 1 chert flake, 4 quartz flakes, 4 Grayson Series sherds, 199 Dan River Series sherds, 1 New River Series sherd, 2 Radford Series sherds, and riverine shells and animal bones.

*Pk-18.*—Mr. Bingman, who was responsible for showing me Pk-17, gave me a collection from a site that I was unable to visit personally. Pk-18 lies on a bottomland, 100 yards from the union of Mill Creek and Greys Creek, on the bank of Greys Creek.

Material collected: 1 unbacked knife, 1 knife fragment, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Patrick Indented Base point, 4 point fragments, 86 chert flakes, 5 quartz flakes, 1 rhyolite flake, 5 Grayson Series sherds, 64 Dan River Series sherds.

*Pk-19.*—Two and a half miles northwest of Nettle-ridge there is a complex of four sites on South Mayo River. *Pk-19*, the most eastern one, is situated on a small, but sharply demarcated secondary terrace on the north bank, east of the bridge over the river. The area of occupation was about 25 yards in diameter. There is no evidence of charcoal deposition.

Material collected: 1 unbacked knife, 2 chert flakes, 6 quartz flakes, 5 Grayson Series sherds, and 4 Dan River Series sherds.

*Pk-20.*—What appears to be an extended village, occurs on the south bank of South Mayo River, west of the bridge from which *Pk-19* is located. There was a small concentration of chips and pottery at the western end of this site that may have been scattered by flood water from west to east, that is, downstream from the point of artifact concentration. The area covered by these artifacts is 75 yards along the river and 10 yards wide, and may be the result of a small concentration by floodwater.

Material collected: 3 unbacked knives, 2 backed knives, 1 knife fragment, 1 Ledbetter point, 1 Savannah River Stemmed point, 2 Madison Triangular points, 1 unidentified point, 3 chert flakes, 43 quartz flakes, 3 Grayson Series sherds, 82 Dan River Series sherds, 5 New River Series sherds, and 4 Radford Series sherds.

*Pk-21.*—A small village lies on a secondary terrace of South Mayo River 200 yards south of *Pk-20*. The intervening surface is free of artifacts, and the village site forms a rectangle about 25 by 30 yards on a side. The terrace is an orange-tan clay varying from 1 to 3 feet above the sandy primary terrace. Most of the artifacts were found in an erosional ditch, cut by run-off water from higher ground to the south.

Material collected: 1 biface scraper, 1 unbacked knife, 1 backed knife, 1 hammerstone-millingstone, 1 point fragment, 4 chert flakes, 30 quartz flakes, 9 Grayson Series sherds, 91 Dan River Series sherds, and 1 New River Series sherd.

*Pk-22.*—A mixture of Woodland and Archaic materials was found on the bottomland of South Mayo River, across the river from *Pk-20* and *Pk-21*. There was no distributional pattern of the artifacts. They were randomly scattered over the planted field, undoubtedly representing discontinuous occupations, widely separated in time.

Material collected: 1 used lamellar flake, 1 backed knife, 1 crude ax, 3 point fragments, 5 chert flakes, 31

quartz flakes, 1 rhyolite flake, and 8 Dan River Series sherds.

*Pk-23.*—On the summit of a ridge running south from Beans Knob, east of Elk Creek and north of Route 103 the cultural remains of small Archaic occupations were recovered. The area was unplanted and rains had washed the top soil off the summit, exposing artifacts. These materials were found in a rectangle 20 by 50 yards in size, with the long axis running north and south, following the trend of the ridge.

Materials collected: 2 unbacked knives, 1 backed knife, 2 knife fragments, 2 Guilford Lanceolate points, 1 Savannah River Stemmed point, 1 large blade fragment, 14 chert flakes, and 42 quartz flakes.

*Pk-24.*—Less than a half mile southeast of Three Forks Mill, on the east bank of Little Dan River is a bottomland that has been subject to overflow from floods. The owner of the land reported finding "spear points" and projectile points adjacent to the river bank, which is not more than 6 feet above normal water level. Among patches of weeds and grass, artifacts were picked up from the surface. The material undoubtedly represents repeated occupation from the Archaic into the Woodland Periods.

Material collected: 2 uniface scrapers, 1 adze, 2 unbacked knives, 1 backed knife, 1 knife fragment, 1 hammerstone-millingstone, 1 microperforator, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Ledbetter point, 1 large blade fragment, 1 Morrow Mountain II point, 1 Patrick Indented Base point, 1 unidentifiable point, 85 chert flakes, 25 quartz flakes, 1 quartzite flake, 1 Grayson Series sherd, 2 Dan River Series sherds, and 1 Radford Series sherd.

## Pulaski County

*Pu-1.*—Back Creek, before entering New River at Belsprings, flows in an irregular arc across the primary terrace. First the flow is in the opposite direction of New River's flow; then, after two small curves through the sandy flood plain, it turns to meet New River at an angle. At about the center of the irregular arc thus formed is an older river bar composed of river-lain gravels and cobbles that have withstood later erosion. An area some 20 yards in diameter, exposed by plowing, produced artifacts. This older terrace is larger than the dimensions given above as it extended downstream in reference to New River into a dense sod that could not be examined without excavation.

Material collected: 1 lamellar flake scraper, 1 adze, 1 knife fragment, 1 hand chopper, 1 unclassified worked stone item, 1 Levanna Triangular point, 3 Savannah River Stemmed points, 2 large blade frag-

ments, 1 Guilford Lanceolate point, 25 chert flakes, 8 quartz flakes, 2 quartzite flakes, and 104 ferruginous sandstone flakes.

*Pu-2.*—Both sites, Pu-2 and Pu-3, are located at Belsprings on the same secondary terrace of New River. Pu-2 is downstream from Pu-3 with the two areas of occupation being 0.2 mile apart.

Pu-2 was in wheat and corn at the time of my visit with Mr. David Huddle and Mr. David Bays who showed me its location. The outlines of the site, according to their experience in previous surface collecting and also from observations made that day, show a large village, extending probably 200 yards parallel to the river, and as much as 50 yards inland. Although the area was untested there were some indications of firepits, and "blackened areas" were described by the two young men. The collection made for study came mostly from 25 yards inland from New River that had been planted in corn.

Material collected: 1 uniface scraper, 1 used lamellar flake, 4 unbacked knives, 1 gouge, 1 Clarksville Small Triangular point, 2 Madison Triangular points, 2 Levanna Triangular points, 3 Hamilton Triangular points, 1 Patrick Indented Base point, 1 point fragment, 5 unidentified points, 111 chert flakes, 14 quartz flakes, 2 quartzite flakes, 1 ferruginous sandstone flake, 1 Grayson Series sherd, 11 New River Series sherds, 127 Radford Series sherds, 58 Wythe Series sherds, and 1 unclassified sherd.

*Pu-3.*—This site is approximately the same size as Pu-2, but at the time of my visit was in clover. A surface collection was made in bare spots, and the size of the site is estimated from the limits within which artifacts were recovered and from the experience of my informants.

Mr. David Huddle and Mr. David Bays generously assisted in excavating a 5 by 5 foot strata cut that was dug 78 feet from the edge of the embankment leading to the primary terrace, and about midway in the axis parallel to the river. The top 8 inches were composed of fine black sand, and were clearly separated from a yellowish-tan sand-clay soil below. Two storage pits were found in the test square. Both were 2 feet in diameter and 3 feet deep, with well-defined margins. The soil of the pits was loose and soft compared to the compactness of the sand-clay of the terrace.

Messrs. Huddle and Bays relate that they have found clay pipes, points, pottery, gorgets, bears' teeth, antler projectile points, celts, and pitted hammerstones here.

A sample of charcoal was submitted to the Smithsonian Institution's Radiation Biology Laboratory from the 12-24-inch level of the southwest corner of the square. The carbon-14 date is A.D. 1600  $\pm$  200 years (SI-129).

Material recovered is arranged by surface and excavated levels:

Surface: 1 backed knife, 1 point fragment, 2 chert flakes, 1 New River Series sherd, 77 Radford Series sherds, 3 Wythe Series sherds.

Level 0-6 inches: 1 Type I-drill, 2 used lamellar flakes, 1 unused lamellar flake, 1 hammerstone-millingstone, 3 Madison Triangular points, 1 Hamilton Triangular point, 1 point fragment, 27 chert flakes, 4 quartz flakes, 1 quartzite flake, 6 New River Series sherds, 409 Radford Series sherds, 11 Wythe Series sherds, and 1 worked riverine shell.

Level 6-12 inches: 1 graver, 1 unclassified worked stone item, 1 Clarksville Small Triangular point, 1 Levanna Triangular point, 18 chert flakes, 1 Grayson Series sherd, 8 New River Series sherds, 248 Radford Series sherds, 5 Wythe Series sherds, and 2 turkey bone splinter awls.

Level 12-18 inches: 1 used lamellar flake, 1 bone spokeshave, 1 bone needle, 1 fragment of a bone awl, 1 clay spoon, 1 clay pipe, 1 Dallas Triangular point, 17 chert flakes, 2 quartzite flakes, 1 Grayson Series sherd, 3 New River Series sherds, 126 Radford Series sherds, 2 Wythe Series sherds, and 1 unmodified haft drill.

Level 18-24 inches: 1 clay pipe, 1 point fragment, 11 chert flakes, 1 quartz flake, 1 New River Series sherd, 54 Radford Series sherds, and 2 Wythe Series sherds.

Level 24-30 inches: 1 unused lamellar flake, 1 unclassified worked stone item, 5 chert flakes, 48 Radford Series sherds, and 2 Wythe Series sherds.

Level 30-36 inches: 1 turkey bone splinter awl.

Riverine shell and animal bones were found in all excavated levels.

*Pu-4.*—A small Archaic site on the western secondary terrace of a small unnamed stream is 0.25 mile south from Belsprings. Material had been collected previously by Mr. David Huddle from an area about 10 yards in diameter.

Material collected: 1 Guilford Lanceolate point, and 6 chert flakes.

*Pu-5.*—In contrast with the valley occupation of Pu-4, this is an Archaic site on the top of a flat ridge about half a mile south of Belsprings. With the aid of Messrs. Huddle and Bays, I was able to recover some material from the east side of the ridge where it had been eroded from the top. Pu-5 was in such dense sod and underbrush nothing could be found. My companions reported they had never found any pottery here, but had found a variety of stemmed and notched projectile points.

Material collected: 1 large blade fragment, 1 Patrick Indented Base point, 1 unidentified point, 51 chert flakes, 4 quartz flakes, and 2 ferruginous sandstone flakes.

*Pu-6.*—Back Creek Farms, owned by Mr. George Farris, has much history attached to it. The barn, with 3-foot high triangular gun ports and hand-hewn timbers, recalls frontier southwest Virginia days. Another building on the farm was a hospital during the Civil War for wounded from the Battle of Cloyd's Mountain. If this were not enough history, Mr. Farris has discovered two Archaic sites on his large holdings. One of these, *Pu-6*, is a short distance west of his home in his garden plot. The whole complex of houses and gardens sits on a sandy plateau higher than Back Creek to the east, and an unnamed creek to the west. *Pu-6* is probably slightly larger than 30 yards in diameter; the artifacts are thinly scattered suggesting that many of them had already been collected from the surface of this site (Plate 4*b*).

Material collected: 1 Bifurcated Base point, 19 chert chips, and 2 quartz chips.

*Pu-7.*—One-half mile west of *Pu-6*, and separated from it by a 160 foot high ridge, is *Pu-7*. This Archaic occupation is 200 yards from another unnamed creek that issues from Little Walker Mountain to the northwest. The occupational debris is scattered over an area of 20 by 30 yards and, at the time of my visit to the site with Mr. Farris, was in corn. He and I picked up the material reported below in about half an hour. At the point of the site the soil is a sand clay, and the topography is relatively flat, although on the side of a hill.

Material collected: 1 Type I-drill, 1 drill fragment, 1 lamellar flake scraper, 1 uniface scraper, 1 used lamellar flake, 1 unbacked knife, 3 knife fragments, 1 core, 1 Morrow Mountain II point, 1 Bifurcated Base point, 1 Big Sandy Sidenotched point, 2 unidentifiable points, 107 chert flakes, 17 quartz flakes, 14 quartzite flakes, and 48 ferruginous sandstone flakes.

*Pu-8A and Pu-8B.*—Several years ago the Radford Arsenal was bulldozing topsoil from the bank of New River opposite Whitehorn. It is said that burials and/or village debris were found to a depth of 9 feet. When burials were discovered, the bulldozing stopped. One burial that excited considerable local interest was placed in one of the Hercules Powder Company's houses. It was later removed and reburied. It originally had been prone, head slightly tilted to the left, right arm placed across the chest, and the left on the abdomen. Both knees had been flexed so that the knees were at the left elbow, and the heels were drawn up to the pelvis.

With the help of Mr. Cubid Epperly, a security guard at the plant, a reconnaissance of the village was carried out. Most, if not all of the site is outside the plant's security fence, but still on Radford Arsenal property and subject to constant watch by security

guards. Pines have been planted, and below the surviving pines is a tall grass that was a tremendous handicap to delineating the actual size of the village. It is estimated that the village is at least 0.25 mile long, and may be as much as 200 yards wide in places.

Two collections were made. The most downstream or western one was collected at the point where the major bulldozing activity had been carried out. This is from Section A. Upstream or eastward from the point of this collection there was an interval of 100 yards where nothing could be seen in the tall grass. At the end of this distance erosion had exposed the ground (Section B) and another collection was made.

I was shown bone awls, bone needles, stone celts, and charred corn cobs said to have come from this site.

Material collected from Section A: 1 deer ulna awl, 1 Levanna Triangular point, 6 chert flakes, 2 quartz flakes, 1 Grayson Series sherd, 7 New River Series sherds, 165 Radford Series sherds, 18 Wythe Series sherds, and 1 notched riverine shell scraper.

Material collected from Section B: 1 backed knife, 1 Levanna Triangular point, 1 point fragment, 4 chert flakes, 2 quartz flakes, 1 quartzite flake, 37 New River Series sherds, 5 Radford Series sherds, and 30 Wythe Series sherds.

Riverine shell and animal bones were collected in both Sections A and B.

*Pu-9.*—Across New River from *My-5* is a secondary terrace about 300 yards long, 100 yards wide and 15 to 20 feet above water level. This is a well-known archeological site to nearby collectors. An adequate surface collection was impossible to obtain when first visited due to a cultivated cover that stood as high as the waist. Later, with the owner's permission, and with hay balers circling around us, we put in a five-foot-square strata cut near the midpoint of the terrace where a small amount of shell had been exposed. Luckily, we hit a pit in the center of the cut. At a depth of 12 inches there was a pavement-like array of cobbles, probably a hearth, covering the pit from wall to wall. At this point the circular pit was 2 feet 8 inches in diameter, but below this point the diameter increased until it was 4 feet, forming a truncated cone. The flat bottom of the pit was 35 inches below the surface.

The pit itself was filled with occupational debris but there was very little in the surrounding hard-packed clay soil through which the cut had been dug. In addition to the material reported below, a piece of ochre was found at Level 6–12 inches and a small bag of dirt from Level 12–18 inches was kept for flotation for plant remains. This dirt contained corn grains, a fragment of a square 8 row corn cob, and nut shells, probably acorn. Dr. Richard A. Yarnell examined



some of the carbonized material and reported (personal communication):

The plant remains you sent from Pu-9 include 45 kernels of corn and two acorn meat halves. There is one other piece of carbonized material which I cannot identify. The corn is not of the type which occurs latest in prehistoric sites, but I will be surprised if it dates from before A.D. 1000.

The charcoal associated with these plant remains was Carbon-14 dated by the Smithsonian Institution's Radiation Biology Laboratory as A.D.  $1330 \pm 120$  years (SI-130).

Material recovered from the surface and excavated levels:

Surface: 1 unclassified stone worked item, 1 unidentified point, 3 chert flakes, 2 quartz flakes, 2 Radford Series sherds, 35 Wythe Series sherds.

Level 0-6 inches: 1 hammerstone-millingstone, 20 chert flakes, 10 quartz flakes, 3 quartzite flakes, 9 Radford Series sherds, and 71 Wythe Series sherds.

Level 6-12 inches: 1 bone spokeshave, 1 point fragment, 17 chert flakes, 6 quartz flakes, 11 New River Series sherds, and 161 Wythe Series sherds.

Level 12-18 inches: 1 hammerstone-millingstone, 1 antler flaker, 1 Madison Triangular point, 2 Levanna Triangular points, 13 chert flakes, 3 quartz flakes, 1 quartzite flake, 3 New River Series sherds, 81 Wythe Series sherds, 1 unclassified worked bone fragment, 1 beaver tooth tool, and one-half of a clay bead or spindle wheel.

Level 18-24 inches: 1 unused lamellar flake, 1 pottery disk, 1 unclassified worked stone item, 10 chert flakes, 6 quartz flakes, 7 New River Series sherds, 3 Radford Series sherds, and 64 Wythe Series sherds.

Level 24-30 inches: 9 chert flakes, 2 quartz flakes, 2 quartzite flakes, 2 New River Series sherds, 64 Wythe Series sherds, 1 bone splinter awl, and 2 antlers.

Level 30-36 inches: 3 chert flakes, 4 quartz flakes, and 3 Wythe Series sherds.

Riverine shells and animal bones were also found in the excavation.

*Pu-10.*—John Reeves (1958) described this site under the title "Draper Valley Indian Village Site." He promised at this time to report an analysis of the pottery; later I applied to him for a loan of the pottery which he generously supplied.

This compact village was on a slope 200 yards from Sloans Creek, and almost totally destroyed in the construction of Interstate Route 81. At the time of my visit I would not have been able to identify the location if it had not been pointed out to me by someone who had been there at the time of its destruction. We were not able to find a single artifact or feature which related to it.

Material loaned: 63 Radford Series sherds and 17 Wythe Series sherds.

*Pu-11.*—There were two exceptional features at this Archaic site. First, the large number of worked, ferruginous sandstone cobbles was greater than at any other place. These were accompanied by large percussion flaked spalls in unprecedented numbers. Secondly, the 200 by 50 yards of alluvial plain over which the finds were scattered inland from Little Walker Creek was crossed by two erosional channels, dividing the site into three islands of artifacts. The largest was the most eastern near Route 100.

Material collected: 2 lamellar flake scrapers, 1 backed knife, 5 knife fragments, 6 hand choppers, 1 Levanna Triangular point, 3 Savannah River Stemmed points, 1 Hardaway Sidenotched point, 25 chert flakes, and 141 ferruginous sandstone flakes.

*Pu-12.*—This site is on the north side of Big Reed Island Creek 3.5 miles south of its entrance into New River. The primary terrace consists of fine, dark grey sand, while the secondary terrace, 30 yards from the river's edge, is clay and rises sharply from the lower one. The material from the secondary terrace, an Archaic site, was scattered along the bank of the secondary terrace where it had eroded out of the ground. The collection would have been larger if the flat terrace had not been covered with waist-high rye.

Material collected: 1 biface scraper, 1 point fragment, 1 Guilford Lanceolate point, 16 chert flakes, 23 quartz flakes, and 30 quartzite flakes.

## Roanoke County

*Rn-1.*—One and a half miles southwest of Catawba we passed a farm named "Indian Camp Farm," after Indian Camp Creek. This was too good a lead to pass up, so we inquired of the owner if there actually had been an "Indian" camp on his farm. A ridge overlooking the upper source of Roanoke River was pointed out, and we were shown a number of stemmed points that were said to have come from it. An area of 25 by 75 yards on the summit of the ridge was an Archaic camp site.

Material collected: 1 unbacked knife, 1 Guilford Lanceolate point, 11 chert flakes, 2 quartz flakes, and 7 quartzite flakes.

## Russell County

*Ru-1.*—A village "circle" was found on Loop Creek about 2.5 miles south of Smithfield. Terrace formation was not so definite that I could be sure on which one the village had been placed, but it seemed to be the secondary. Due to the fact that the field of corn and

tobacco had been recently plowed village outlines were blurred, but they probably were 50 yards wide by 100 yards long in a northeast-southwest direction. There were intervals of black soil with attendant village material interspersed between areas in which nothing was found.

This village has been dug extensively by collectors and clay pipes have been reported.

Material collected: 1 Type I drill, 1 uniface scraper, 1 unbacked knife, 1 hammerstone-milling stone, 1 stone disk, 1 bear tooth, 1 reamer, 2 unclassifiable worked stone items, 1 Levanna Triangular point, 1 Hamilton Triangular point, 133 chert flakes, 2 quartz flakes, 39 New River Series sherds, 79 Radford Series sherds, 2 unclassified sherds, 1 *Oliva* shell, and riverine shell and animal bones.

*Ru-2*.—A primary terrace, in sod at the time of our visit, was easily identified as a village because Elk Garden Creek had undermined and eroded away a bank exposing grey sandy clay soil with shell, bone and sherds. Examining between clumps of grass we found that the village might have been as large as an acre in size. Since this area had been less extensively dug than others, we petitioned the late Senator Harry Stuart for permission to excavate a test square. He kindly obliged us.

The possibility of some depth appeared near the bank of Elk Garden Creek, and the strata cut was dug about 2 feet inland from the eroded bank. The charcoal stained soil was 32 inches deep, ending abruptly in a dense, tan clay subsoil. There were no special features except a layer of ash at 18 inches in the northeast corner of the square. Small, broken fragments of fire-cracked stones and small lumps of charcoal were uniformly scattered throughout the dirt.

In addition to the strata cut we were able to make a small surface collection from the floor of a rain-washed gully.

*Oliva* shell and a stone gorget are said to have been dug out of the ground here.

Material collected from the surface and each excavated level:

Surface: 1 Type II drill, 1 graver, 1 used lamellar flake, 1 unbacked knife, 1 Levanna Triangular point, 1 Dallas Triangular point, 1 large blade fragment, 2 point fragments, 1 unidentified point, 64 chert flakes, 74 Radford Series sherds.

Level 0-6 inches: 1 knife fragment, 1 Clarksville Small Triangular point, 1 Levanna Triangular point, 52 chert flakes, 156 Radford Series sherds, and 2 unclassified sherds.

Level 6-12 inches: 51 chert flakes, 1 rhyolite flake, 221 Radford Series sherds.

Level 12-18 inches: 2 Dallas Triangular points, 1

point fragment, 22 chert flakes, 1 unclassified flake, 319 Radford Series sherds, 1 bone splinter awl.

Level 18-24 inches: 1 knife fragment, 1 Hamilton Triangular point, 5 chert flakes, and 43 Radford Series sherds.

Animal bones and riverine shells were found on the surface and in the excavated levels.

*Ru-3A and Ru-3B*.—This site has been described by Wedel (1951), and the pottery analyzed by Caldwell (1951) under the title of the Elk Garden site. My informant said that there were two interlocking village circles visible from higher ground when the land was plowed. It was impossible to see these at the time of my visit because the entire bottomland west of Elk Garden Creek, a short distance from the town of Elk Garden, was in corn. There seemed however, very little reason to doubt the information and two collections were made. The more southern "circle," downstream on Elk Garden Creek, was labeled "A" and the more northern upstream one labeled "B." The site is larger than most of those nearby and surface material was easily collected. An interesting feature of the site is the profusion of riverine snail shells littering the ground. This site has been extensively dug into in a haphazard fashion.

Material collected from *Ru-3A*: 1 drill fragment 1 point fragment, 88 chert flakes, 68 New River Series sherds, 211 Radford Series sherds, 2 Wythe Series sherds, and 1 worked *Busycon* fragment.

Material collected from *Ru-3B*: 1 Type II drill, 1 celt, 1 pendant, 1 gouge, 1 Clarksville Small Triangular point, 1 large blade fragment, 1 Madison Triangular point, 1 Morrow Mountain I point, 1 point fragment, 40 chert flakes, 1 ferruginous sandstone flake, 69 New River Series sherds, 94 Radford Series sherds, 1 Wythe Series sherd, one bone bead, and 1 unclassified sherd.

Numerous riverine shells and animal bones were collected from both sections.

*Ru-4*.—This village was placed on top of a truncated cone-like hill, 80 feet above the valley floor, 2.5 miles southeast of Elk Garden. The available living area on the plateau is about 75 yards in diameter, which at the time of our visit was entirely in alfalfa, and the amount of village debris we were able to recover was limited. Possibly the location of this village site was selected for defensive purposes.

Material collected: 2 New River Series sherds, 6 Radford Series sherds, 1 Wythe Series sherd, and 1 unclassified sherd.

*Ru-5*.—At the base of the knoll on which Site *Ru-4* is located, there is a very definite secondary terrace of Loop Creek on which artifacts were thinly scattered. The typology indicates a long range of time, and the large number of triangular forms is best explained as



an association with the village (Ru-4) on top of the hill.

Material collected: 1 graver, 1 biface scraper, 2 used lamellar flakes, 7 knife fragments, 2 Madison Triangular points, 3 Levanna Triangular points, 1 Morrow Mountain I point, 1 Stanley Stemmed point, 231 chert flakes, and 1 ferruginous sandstone flake.

*Ru-6.*—One and a half miles south and slightly east of Elk Garden was a vertical shaft burial cave that has been entered many times. The late Senator Harry Stuart had one of the skulls that had been brought out of it. No other materials have been reported.

*Ru-7.*—Mr. H. B. Hanson, a descendant in the family for which Hansonville was named, owns a farm on which an aboriginal village was built. This land was planted in wheat at the time we visited it but we were able to make a surface collection along the edges of the field. The occupation area was reported to have been about an acre in size, and inspection bore this out. It has been dug into by collectors, one of whom reported fenestrated shell gorgets with a rattlesnake (?) design and other shell items as a part of the burial goods. While it is close to Mountain Creek and east of the North Fork of Little Moccasin Creek, it does not lie on either, but on a slope northwest of Mountain Creek. The area is relatively level and sandy.

Material collected: 1 Type I-drill, 1 lamellar flake scraper, 1 Madison Triangular point, 1 Dallas Triangular point, 65 chert flakes, 69 New River Series sherds, 13 Radford Series sherds, 1 unclassified sherd, and riverine shells and animal bones.

*Ru-8.*—A mile northeast of Rosedale, Route 19 parallels Elk Garden Creek, which is 25 yards away. In the level lane between creek and road, artifacts are scattered for 100 to 150 yards, seemingly in small clusters. Information gathered from several sources indicates that Ru-8 is one of a complex of Archaic sites scattered over the surrounding fields.

Material collected: 1 Type I drill, 1 Type III drill, 1 hafted scraper, 1 used lamellar flake, 2 unbacked knives, 4 backed knives, 5 knife fragments, 1 atlatl weight fragment, 1 core, 1 shredder, 1 Levanna Triangular point, 4 Lamoka points, 3 unidentified points, 286 chert flakes, and 1 quartz flake.

*Ru-9.*—Aboriginal village sites were not restricted to riverbottoms in southwest Virginia, and this village is a good example. A mile west of Banner Corner, the site is located high on a plateau, overlooking the surrounding terrain. The nearest stream is Castle Run. This site has not been destroyed by extensive digging as others have been. The owner said that when a hole for a septic tank was dug, pottery was found in the excavation, possibly 18 to 24 inches below the surface.

A collection of material was made from this site in spite of rain and a thick cover of grass and alfalfa.

Material collected: 1 Dallas Triangular point, 1 Savannah River Stemmed point, 13 chert flakes, 94 New River Series sherds, 12 Radford Series sherds, 21 Wythe Series sherds, 1 unclassified sherd, and riverine shells and animal bones.

*Ru-10.*—This cave, with a vertical shaft, is 100 yards west and slightly north of Ru-9. It has been mostly "silted" over but probably could be entered, according to my informant. Human bones are known "for sure" to have come from this cave that had been entered previously many times. No materials could be obtained.

*Ru-11.*—Known as the Castlewood Site, this village is another, but larger, village located on a plateau in the neighborhood of Ru-9. It is more than a mile from Clinch River. It has been dug into many times and the following data are a compilation of facts known about it. Burials occur in pits that have a narrow neck at the surface and a broader flat base about 2 feet below the surface. To one side of a pit a child was found lying prone, while on the opposite side there was a pot as a grave offering. Some burials are flexed, and in other graves the bones have been burned as if cremated. With another burial was an "arrow-makers kit", i.e., projectile points in all stages of manufacture with accompanying bone tools to make them. With one fully flexed burial there was a pot at the head and another at the feet. Other grave goods include fenestrated rattlesnake gorgets, copper tube beads  $2\frac{1}{2}$  inches long and one-eighth inch in diameter, columella of conch beads 2 to 5 inches long and one-half inch in diameter, large, beautifully made celts, stone pipes with "knobs" on them, "effigy pots" with small clay figurines looking into the pot. Unfortunately, I saw none of these items.

Material collected: 1 hammerstone-millingstone, 1 core, 1 Madison Triangular point, 9 chert flakes, 125 New River Series sherds, 23 Radford Series sherds, 7 Wythe Series sherds, and riverine shells and animal bones.

*Ru-12.*—Immediately adjacent to Ru-11 is a cave, again with vertical shaft, that contained human bones. The entrance is in a small sinkhole now filled with erosional dirt and dumped litter. No artifacts were found.

*Ru-13.*—A fifth site may be added to the complex of geographically related sites in the Elk Garden neighborhood, i.e. Sites Ru-1, 2, 3, 4. This one is 2 miles southwest of Rosedale and a tenth mile from Dry Branch on an alluvial fan. Judging by debris scattered through wheat stubble, it is a circular village of about 50 yards in diameter. It has been dug into by collectors, but no

clear-cut picture of what was recovered, or how extensive their digging, is known.

Material collected: 1 biface scraper, 1 shredder, 1 stone disk, 1 unclassifiable worked stone item, 1 Madison Triangular point, 1 Savannah River Stemmed point, 90 chert flakes, 24 New River Series sherds, 81 Radford Series sherds, 8 Wythe Series sherds, and riverine shells and animal bones.

### Scott County

*Sc-1.*—Within the town of Dunganon, and on the secondary terrace of the right bank of Clinch River there is an area of black soil about 25 by 75 yards in size. A prison camp was nearby at one time, and the local people claim that a guard would get a group of prisoners to help him search the ground for projectile points and other artifacts. The site has been extensively dug into by many collectors as well. In spite of this intensive activity, the "valueless" articles such as potsherds were left and an adequate surface collection was made.

Material collected: 1 Type I drill, 1 drill fragment, 1 hafted scraper, 1 uniface scraper, 1 unused lamellar flake, 4 backed knives, 1 celt, 2 stone disks, 1 unclassifiable worked stone object, 1 Madison Triangular point, 1 Dallas Triangular point, 1 large blade fragment, 1 Bifurcated Base point, 1 Patrick Indented Base point, 2 point fragments, 1 Big Sandy Side-notched point, 2 unidentifiable points, 81 chert flakes, 1 Lee Series sherd, 174 New River Series sherds, 8 Wythe Series sherds, and riverine shells and animal bones.

*Sc-2.*—The area of occupation was indefinite but apparently covered several acres, situated well away from Clinch River and Cub Run, southwest of Dunganon. The tobacco field was littered with chips, and while my informant haggled with the tenant and his wife over the price of stemmed and notched points that were said to have come from the field, I made a hasty surface collection.

Material collected: 1 unbacked knife, 2 backed knives, 2 knife fragments, 1 core, 1 Guilford Lanceolate point, 146 chert flakes, and 1 steatite vessel fragment.

*Sc-3.*—Ceramic-bearing sites without numerous accompanying riverine shells among the artifacts were not frequent but did occur sometimes. Only one shell was found at this site, and was accompanied by an array of stemmed and notched points similar to those found at *Sc-2*, a tenth mile inland. The site itself was on a secondary terrace of Cub Run about a tenth mile north of Clinch River. Charcoal blackened sand, with village debris, could be observed in an area 25 yards in

diameter, but beyond this there were numerous chips in a reddish clay subsoil. The total observable area of cultural refuse was about 50 by 75 yards in size.

Material collected: 2 gravers, 3 used lamellar flakes, 6 unbacked knives, 15 backed knives, 7 knife fragments, 9 unclassifiable worked stone objects, 1 Levanna Triangular point, 1 Savannah River Stemmed point, 1 Morrow Mountain II point, 1 Lowe Flared Base point, 1 point fragment, 1 large blade fragment, 8 unidentified points, 254 chert flakes, 2 Radford Series sherds, 1 Wythe Series sherd, 17 unclassified sherds, 1 riverine shell, and animal bones.

*Sc-4.*—About 5 miles downstream from Ft. Blackmore directly on the north or right bank of Clinch River is an unusual site. It is situated on a ridge-like embankment, 20 yards wide and 50 yards parallel to the river. Material could be picked up in erosional lanes on the top and river side of this narrow, rounded ridge. Inland there was a flat wider bottomland that seemingly would have been a better place for a habitation site but no artifacts came from this area. Pottery was not plentiful, but firecracked stones and chips were. This site has been dug into by local collectors, but there is no record of what was found.

Material collected: 2 gravers, 1 used lamellar flake, 2 unbacked knives, 9 backed knives, 6 knife fragments, 2 hammerstone-millingstones, 1 core, 2 unclassifiable worked stones, 1 Guilford Lanceolate point, 1 point fragment, 1 unidentified point, 199 chert flakes, 1 Grayson Series sherd, 7 Lee Series sherds, 25 Radford Series sherds, 87 unclassified sherds, and riverine shells and animal bones.

*Sc-5.*—On a secondary terrace of Clinch River east of Stony Creek at Ft. Blackmore is a village site that is recorded for future reference. No collection could be made because the owner was "sensitive" about disturbing the Indian materials. Strangely enough, there is in circulation among local buyers and sellers of Indian artifacts, grave goods said to have been dug from the site.

*Sc-6.*—A little more than a mile southwest of Ft. Blackmore is a cave, known locally as the Cox Cave. There are two openings, one on the summit of the ridge, and one on the eastern slope. Around the upper entrance the ground had been disturbed by some rather large pits. On the fan of the side entrance we picked up human bones that had been taken from the cave. In a collection in Ft. Blackmore we were shown a skull, mandible, triangular point, and a dove effigy pipe said to have come from the cave.

*Sc-7.*—On the right bank of Clinch River, downstream from the bridge that carries the traffic of State Route 619 is the home of T. M. Cox. Robert Wainwright had reported a "shell field" in this neighborhood but we were unable to locate it. We did locate

a village downstream from the Cox home on the secondary terrace of the river which covered about 3 acres. The artifacts were limited in number, except the flakes which were relatively profuse.

Material collected: 1 stone ball, 1 drill fragment, 1 graver, 1 uniface scraper, 1 used lamellar flake, 2 knife fragments, 4 cores, 1 unclassifiable stone item, 2 Levanna Triangular points, 1 Hamilton Triangular point, 1 Dallas Triangular point, 1 Guilford Lanceolate point, 1 Morrow Mountain II point, 1 unidentified point, 299 chert flakes, 1 Lee Series sherd, 6 Radford Series sherds, 2 unclassified sherds, and animal bones.

*Sc-8.*—A well-known archeological feature of the town of Ft. Blackmore is a mound near the town limits on Route 65. The mound sits atop a truncated, conical knoll, with its base nearly filling the knoll's plateau, and the slope of the mound is nearly coincident with the slope of the knoll. The entire center has been removed leaving a concavity with a surrounding wall about 3 feet in width. At the eastern side a ditch has been dug through the wall and is now subject to erosion. All of the mound is covered with small trees, bush, and weeds.

Wainwright (1915) is said to have dug burials from the mound. He gives the dimensions as 12 feet high and 70 feet across the base. I estimate the mound is now 8 to 10 feet high, 50 to 60 feet across the base and 40 feet across the top from wall to wall, to the outside. Mr. James Spengler, the landowner, says the concavity was dug to accommodate an "apple cellar" and house. There was not a single item other than the apparent artificial nature of its construction and its history to identify this as a mound. Mr. Spengler is contemplating bulldozing the mound off the hill and building a home here.

*Sc-9.*—"The Suck" is a deep Clinch River pool near Ft. Blackmore. Northeast of it is an alluvial plain subject to erosion and filling with sand as floods, locally called "tides," inundate the plain. On a sand-filled bank of this plain, shell and chips are found in profusion but pottery is relatively scarce. The owner reported, and we saw, fragments of soapstone vessels, pottery, "spikes" as projectile points are called, a fully grooved ax, effigy clay pipe, a clay pipe that called for insertion of a stem, celts, blades, and a disk of stone that are said to have come from the area. The owner, unfortunately, had sold these items.

Material collected: 1 Type II drill, 1 graver, 1 unbacked knife, 1 backed knife, 2 knife fragments, 1 hammerstone-millingstone, 1 shredder, 1 gouge, 2 unclassifiable worked stone objects, 1 Madison Triangular point, 1 Levanna Triangular point, 3 Dallas Triangular points, 1 Savannah River Stemmed point, 3 point fragments, 1 unidentified point, 189 chert flakes, 16 Lee Series sherds, 5 New River Series

sherds, 13 Radford Series sherds, 2 unclassified sherds, and animal bones.

*Sc-10.*—A well-known cave yielding archeological materials is near Duffield and is best described by an early account (Addington, 1932, p. 285):

But the cavern that seems to be most nearly connected with prehistoric times, and well known to the aboriginal inhabitants of our territory, is located in the Purchase Ridge in sight of Duffield, Virginia.

This cave measures 8 to 10 feet in diameter and from 25 to 30 feet in depth. It seems to have been used by the Indians as a burial place. Some years ago, the late Col. A. L. Pridemore had a thorough investigation made of its contents and found that it contained a large quantity of human bones, long black human hair, teeth, skulls, Indian pipes, shells, beads, fragments of deer horns and small pieces of mulberry wood. It is said that medical students were able from this collection of bones, to fit out complete skeletons with few misfits as to size of bones.

Colonel Pridemore obtained an excellent collection of Indian relics from this cavern which he later donated to the College of William and Mary.

We did not visit the cave as its mouth is said to have fallen in; nor could we find the collection reportedly donated to William and Mary College.

## Smyth County

*Sm-1.*—Some sites of Archaic occupations are quite small, and this chipping one is no more than 10 yards in diameter. It lies on a primary terrace of Walker Creek's alluvial fill about three-fifths mile north of the creek's entry into the Middle Fork of Holston River.

Material collected: 1 graver, 1 knife fragment, 1 shredder, 2 unidentified points, 16 chert flakes, and 1 quartz flake.

*Sm-2.*—A short distance up Walker Creek from its confluence with the Middle Fork of the Holston are two areas of Archaic occupation, Sites Sm-2 on the west and Sm-3 on the east. To the west of the creek, the tertiary terrace is broad and flat. In a strip of land 20 yards wide and 75 yards long at the eastern edge of this tertiary terrace is Sm-2. Examination of the adjoining primary and secondary terraces, adequately exposed by plowing and rainwash, did not reveal any specimens, nor did the land further inland from Walker Creek.

Material collected: 1 lamellar flake scraper, 1 graver, 1 biface scraper, 2 used lamellar flakes, 1 unused lamellar flake, 1 unbacked knife, 1 backed knife, 1 knife fragment, 1 hammerstone-millingstone, 1 Ledbetter point, 2 large blade fragments, 1 Morrow Mountain II point, 1 point fragment, 1 Palmer Side-notched point, 5 unidentified points, 111 chert flakes, 11 quartz flakes, 68 rhyolite flakes, and 4 flakes of other types of stone.

*Sm-3.*—This is another small chipping site, presumably with Archaic associations, near *Sm-2*. It is on a mound-like remnant of erosional activity by Walker Creek, and probably correlates with the tertiary terrace on the west side of that creek. At the time of our visit it had been planted in corn and was well washed by rain.

Material collected: 1 graver, 1 core, 1 Patrick Indented Base point, 15 chert flakes, and 6 rhyolite flakes.

*Sm-4.*—Although Wedel (1951) was the first to mention this site, Evans (1955, p. 148) studied the 29 sherds that Wedel had gathered. Known locally as the Fox Site, it lies in the horseshoe bend of the Middle Fork of Holston River opposite the entrance of Walker Creek. Pottery, shell, and other debris are scattered over the center of the inverted "U" as well as along the downstream leg. A surface collection was made first, then a five-foot square strata cut was dug in 6-inch levels at a point in the center of the arc. All evidence of cultural activity stopped at 14 inches below the surface except for a single postmold. At 6 to 12 inches below the surface there was a rock pattern that probably represented a hearth. Charcoal, shell, and animal bone were abundant. The soil was clayey, of a uniform grey color to a depth of 10 inches; deeper than this the soil became a mottled tan and grey.

Various parts of the site have been dug by many individuals.

Material collected from the surface and levels of the excavation:

Surface: 1 Type I-drill, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Savannah River Stemmed point, 1 point fragment, 26 chert flakes, 1 quartzite flake, 5 rhyolite flakes, 29 New River Series sherds, 213 Radford Series sherds, 50 Wythe Series sherds, 2 Smyth Series sherds, and 1 unclassified sherd.

Level 0-6 inches: 1 used lamellar flake, 1 Hamilton Triangular point, 1 Dallas Triangular point, 8 chert flakes, 1 quartz flake, 1 Grayson Series sherd, 25 New River Series sherds, 192 Radford Series sherds, and 53 Wythe Series sherds.

Level 6-12 inches: 1 stone disk, 1 clay pipe, 1 Madison Triangular point, 13 chert flakes, 1 quartz flake, 25 New River Series sherds, 148 Radford Series sherds, 4 Smyth Series sherds, 46 Wythe Series sherds, and 1 unclassified sherd.

Animal bones and riverine shells were found on the surface and in the excavation.

*Sm-5.*—At Seven Mile Ford an area of 2 acres shows up as a blackened circle if viewed from an airplane, or from a position high on the ridge adjacent to it. This "circle" is on a secondary terrace of the south bank of

the Middle Fork of the Holston River. It has been dug into extensively by collectors, and in starting to dig a 5-foot square test pit in 6-inch levels we found that we were re-excavating a pothunter's old hole. Not only did the circular outlines of the hole become clear, but the bones of a skeleton had been reburied in a helter-skelter fashion.

We were able to make a good surface collection from the site. In addition to this we saved the pottery by 6-inch levels. In the seriation study of the pottery these levels were used as though they had not been disturbed to see if the surface collection, that had been made from the entire area of the site, and the sherds from the disturbed levels would reflect the same pottery-type frequencies. It was found that they did.

Since five pottery series were found at this site, the inference is unavoidable that this is an area that had been reoccupied by groups in the region, and that only a fortuitous chance or extensive excavation will provide a stratigraphy with superposition of one series over another.

Two informants provided the information that some burials were in a sitting position, and that a bone fishhook, *Oliva* beads, and conch columella earplugs have been found.

Material collected from the surface and levels of the excavation:

Surface: 1 drill fragment, 1 used lamellar flake, 1 knife fragment, 3 Madison Triangular points, 3 point fragments, 90 chert flakes, 6 quartz flakes, 12 New River Series sherds, 37 Radford Series sherds, 44 Smyth Series sherds, 72 Wythe Series sherds, 1 unclassified sherd.

Level 0-6 inches: 1 hammerstone-millingstone, 1 clay pipe, 1 Levanna Triangular point, 1 unidentified point, 6 chert flakes, 1 quartz flake, 11 New River Series sherds, 39 Radford Series sherds, 11 Smyth Series sherds, and 66 Wythe Series sherds.

Level 6-12 inches: 2 stone disks, 9 chert flakes, 2 quartz flakes, 1 Grayson Series sherd, 15 New River Series sherds, 11 Radford Series sherds, 45 Smyth Series sherds, 53 Wythe Series sherds, 2 unclassified sherds, 1 bone chisel, 1 *Marginella* shell bead, and 1 *Oliva* shell fragment.

Riverine shells, human and animal bones were also collected.

*Sm-6.*—Just north of Seven Mile Ford is a burial cave from which a child's burial, bone beads, and pottery are said to have come. The opening to the cave is on the eastern slope of a ridge at the 2100-foot contour level. It is a narrow slit in a small depression on the side of a steep slope just mentioned. We did not enter the cave and no artifacts were found.

*Sm-7.*—One of the first things we saw at this site were two circular holes in which back-fill had shrunk away from the sides. Since neither the property manager nor owner had knowledge of someone digging there, this type of pothunting must have been done without consent, probably at night. Such clandestine activity was reported also at other sites.

The general region involved is a short distance northeast of Chilhowie on an alluvial plain north and east of the Middle Fork of the Holston. A compact village, 2 acres or more in extent, was on the secondary terrace over one-tenth mile from the river by closest approach. We picked up debris on the surface and saw in a private collection a shell disk bead  $1\frac{1}{4}$  inches wide and one-eighth inch thick, said to have come from the site.

Material collected: 1 Type I drill, 3 Type II drills, 2 drill fragments, 1 uniface scraper, 1 used lamellar flake, 1 unbacked knife, 1 pottery disk, 1 reamer, 1 Clarksville Small Triangular point, 3 Madison Triangular points, 1 Levanna Triangular point, 2 Dallas Triangular points, 5 point fragments, 196 chert flakes, 7 quartz flakes, 15 New River Series sherds, 368 Radford Series sherds, 2 Smyth Series sherds, 47 Wythe Series sherds, and 1 fragment of *Busycon* shell.

*Sm-8.*—When the Chilhowie High School was being built bulldozers uncovered burials, and the mad rush was on! I am told it was not unusual to see 40 to 50 people digging in the yard on the river side of the school. When this was finally prohibited, individuals would go there at night with flashlight and lantern to dig.

One individual reported that there were more than 100 burials encountered (in actuality no one knows how many, as the estimate by others was placed as high as 300). Some burials were in fireplaces; some showed evidence of cremation, and some were flexed burials. These burials were accompanied by grave goods and the following items were described: shell gorgets with rattlesnake design, stone disks, stone balls from 1 to 3 inches in diameter, celts, clay and stone pipes, "spatulas" with holes drilled in them, copper gorget, *Olivella* shell beads, ear plugs, a pot with a "complicated stamped design" (curvilinear?) and a plain shell-tempered pot. Items indicating late settlement of the site and the receipt of trade goods from Whites, are two bronze ear plugs of unusual design, red and creamy-tan glass beads about one-eighth to one-fourth inch tall associated with chert triangular points (2 were Clarksville Small Triangular, 6 were Madison Triangular and 4 were Levanna Triangular). There was also an iron trade ax.

At the time of our visit we were able to pick up artifacts along the edge of roadways and drainage

ditches. West of the school is a small garden from which we increased our pottery sample.

Material collected: 1 Clarksville Small Triangular point, 8 chert flakes, 105 Radford Series sherds, 10 Wythe Series sherds, and riverine shells and animal bones.

*Sm-9A and Sm-9B.*—St. Clair Bottom is a wide alluvial plain on the south side of the South Fork of the Holston River. It is presently bisected by a modern highway crossing it from north to south. The western section, as divided by the highway, was designated Sm-9A. We were told that in this area burials had been excavated associated with fully grooved axes and also polished celts. These latter were described as being 2 inches wide and 5 inches long.

Our surface finds were extremely few although we were directed by the owner to the area that had been excavated by the collectors (Plate 5).

Section Sm-9B, called the "Airport Site" because there was a landing field nearby, has also been reported under the title of St. Clair Bottom (Wedel, 1951; Evans, 1955, pp. 29, 156). It is located at the base of the secondary terrace, 800 feet from the South Fork of the Holston. The village forms a rough circle and is raised 24 to 36 inches above the surrounding flood plain. Mr. H. L. Catron, owner of the land, reports that a child and two adults had been buried together without their skulls which were found together in another hole. Among the objects he knew to have been found here were *Marginella* beads, a bear tooth necklace, fully grooved axes, polished celts, clay and stone pipes, and "spearheads" 6 inches long. Mr. Catron gave the survey a skeleton which was donated to the collections in the Division of Physical Anthropology, Department of Anthropology, Smithsonian Institution.

Material collected from Sm-9A: 1 backed knife, 1 Clarksville Small Triangular point, 3 Levanna Triangular points, 1 Hamilton Triangular point, 1 point fragment, 58 chert flakes, 1 quartz flake, 5 Radford Series sherds, and 2 unclassified sherds.

Material collected from Sm-9B: 1 backed knife, 1 core, 2 pottery disks, 2 Levanna Triangular points, 1 Dallas Triangular point, 46 chert flakes, 2 quartz flakes, 5 New River Series sherds, 12 Radford Series sherds, 12 Smyth Series sherds, 139 Wythe Series sherds, and 4 unclassified sherds.

*Sm-10A, Sm-10B, and Sm-10C.*—On the north or right bank of the South Fork of the Holston River, southwest of St. Clair Bottom, is a village site that after inspection was divided into three study sectors. Sm-10A and Sm-10B are localized areas of blackened soil 10 to 20 yards from the river bank and about 20 yards each in diameter. They are separated by 10 yards of sterile surface soil. Section 10A is upstream

and 10B is downstream. Sm-10C lay inland from these two pottery- and shell-bearing areas. It was without these two cultural items but was profuse with chips and occasional points. The reason for designating three zones was to discern possible temporal differences between Sections Sm-10A and Sm-10B. It was also conjectured that Sm-10C might be a contemporary but peripheral stone chipping area.

With permission of Dr. James C. Wilkinson of Chilhowie we dug a 5 foot strata cut in Sm-10B, near the center of the blackened soil. The upper 16 inches was a black sandy soil with village debris scattered uniformly throughout. From 16 to 18 inches all evidence of occupation stopped with a tan clay subsoil. At the bottom of the occupied zone in the southwest corner, a postmold was discovered measuring 5 inches in diameter and 16 inches deep into the subsoil. To the east, and separated from the postmold by 4 inches, was a shallow depression 6 by 12 by 1.5 inches. The whole was overlain by fireblackened and cracked stones, suggesting that a hearth had been superimposed over the lower level. A second firepit was partially uncovered at the middle edge of the eastern wall, on the subsoil (Plate 6a, b).

Dr. Wilkinson had a small surface collection from the surface of his site among which were projectile points, a stone ball one inch in diameter, animal bones, and a human premolar. It is said that graves have been encountered but we did not see or hear any reliable account of what was found as grave goods, if any.

Material collected from the various sections and levels of excavation:

Sm-10A, Surface: 1 graver, 1 unbacked knife, 1 backed knife, 4 knife fragments, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Dallas Triangular point, 1 point fragment, 1 unidentified point, 57 chert flakes, 2 Grayson Series sherds, 197 Radford Series sherds, 1 Smyth Series sherd, 5 Wythe Series sherds, and 2 unclassified sherds.

Sm-10B, Surface: 1 knife fragment, 70 chert flakes, 2 quartz flakes, 1 Grayson Series sherd, 148 Radford Series sherds, 19 Smyth Series sherds, and 3 Wythe Series sherds.

Level 0-6 inches: 1 drill fragment, 1 uniface scraper, 1 used lamellar flake, 2 unused lamellar flakes, 3 knife fragments, 1 hammerstone-millingstone, 1 clay pipe, 1 Clarksville Small Triangular point, 1 Levanna Triangular point, 1 Hamilton Triangular point, 34 chert flakes, 1 quartz flake, 1 Grayson Series sherd, 349 Radford Series sherds, 1 Smyth Series sherd, and 14 Wythe Series sherds.

Level 6-12 inches: 2 backed knives, 2 knife fragments, 1 hammerstone-millingstone, 1 stone disk, 1 clay spoon, 1 Madison Triangular point, 1 Hamilton

Triangular point, 1 Dallas Triangular point, 58 chert flakes, 2 quartz flakes, 1 unclassified flake, 1 Grayson Series sherd, 1 Lee Series sherd, 287 Radford Series sherds, 2 Smyth Series sherds, and 8 Wythe Series sherds.

Level 12-18 inches: 1 drill fragment, 1 used lamellar flake, 19 chert flakes, 63 Radford Series sherds, 2 Wythe Series sherds, and 1 turkey bone splinter awl.

Sm-10C, surface: 2 Type I drills, 1 Type III drill, 1 unmodified haft drill, 1 adze, 3 unbacked knives, 1 backed knife, 1 celt, 1 hammerstone-millingstone, 2 unclassified worked stone items, 1 Madison Triangular point, 1 Hamilton Triangular point, 4 Dallas Triangular points, 1 Morrow Mountain II point, 3 point fragments, 1 unidentified point, 1 stone disk, 311 chert flakes, 4 quartz flakes, and 29 rhyolite flakes.

*Sm-11A and Sm-11B.*—A few miles northwest of Chilhowie, along the banks of Sulphur Spring Creek, is a very complex site. A marsh had been associated with the flat land adjacent to the creek, and the site. East of the creek is a small flat plain but we were unable to examine it because it was planted in wheat. West of the creek the land was divided into two areas: Sm-11B, defined as the 3 acres adjacent to the creek and Sm-11A, the 3 acres away from the creek on sloping ground. Sm-11A had no pottery, Sm-11B did.

It is said that "gallons" of points, soapstone bowl fragments and blades had been found over the entire site and that stone pipes were associated with burials. We were able to make only a small collection (Plate 5b).

Material collected from Sm-11A: 2 backed knives, 1 Lamoka point, 74 chert flakes, and 8 rhyolite flakes.

Material collected from Sm-11B: 84 chert flakes, 2 quartz flakes, 5 rhyolite flakes, and 8 Radford Series sherds.

*Sm-12.*—This cave is located a short distance from Needmore. Its owner was reluctant to verify information regarding reported burials found in it. Another informant, however, confirmed the reports but knew of no associated artifacts. The cave is easily accessible, has a large dry, sloping entrance, and is listed mainly because there may be aboriginal affiliation.

*Sm-13.*—We recovered two human vertebrae and a rib segment at the mouth of Grinstead cave. It lies on the side of a steep, wooded hill west of Campbell's Chapel. The chimney is straight down, but easily entered by an agile person. It is reported that burials and pottery have been found in it, but they could not be located in any private collections.

*Sm-14.*—Site Sm-9B, the St. Clair Bottom Site, is located at the base of a 40 foot bluff. On top of the



bluff, Mr. H. L. Catron has his home. We were permitted to investigate a small garden in back of the house and discovered an Archaic site (Sm-14) with artifacts strewn widely over an area 20 yards in diameter.

Material collected: 1 unbacked knife, 1 backed knife, 1 Bifurcated Base point, 14 chert chips, and 1 quartzite chip.

*Sm-15.*—In the eastern outskirts of Marion along the left bank of the Middle Fork of the Holston River is a small site without pottery. The chips and points are scattered in a dark alluvial fill over an area 10 by 20 yards. Analysis of the points presents an unusual situation because of the high proportion of triangular varieties on a nonpottery-bearing site. We had been told there was a pottery-bearing site in this area and it is possible that because of the heavy ground cover we did not find it.

Material collected: 1 Type I drill, 3 used lamellar flakes, 1 unbacked knife, 1 knife fragment, 2 Levanna Triangular points, and 87 chert flakes.

*Sm-16.*—On the primary terrace of the left or east bank of Laurel Creek in the town of Broadford there is a site known variously as "Broadford" (Wedel, 1951) and "Brickey" (Evans, 1955, pp. 9, 146). The occupied area was about an acre in extent, and is slightly raised above the surrounding field. It is blackened with charcoal, and contains much village debris. From 300 to 700 burials are said to have been dug from this village, depending on the informant. Wedel illustrates pots, but shell gorgets with rattlesnake design, copper plaque, copper tube beads, shell beads, and pots are also said to have been excavated here, presumably in association with burials. It was also reported to us that clay pipes, Indian "money," i.e., pottery disks, stone disks, "lots of triangular points," fully grooved axes, celts, teeth beads (probably bear), small (1½ to 2 inch high) pots, and pots decorated with animal figures were also part of the numerous finds.

This site has been dug into so many times and by so many people it would take a complete excavation of the site to find any untouched areas for scientific appraisal.

Material collected: 1 used lamellar flake, 1 unclassifiable worked stone object, 1 Dallas Triangular point, 1 point fragment, 3 unidentified points, 116 chert flakes, 3 quartz flakes, 1 rhyolite flake, 5 New River Series sherds, 145 Radford Series sherds, 13 Wythe Series sherds, 1 fragmentary *Oliva* shell, and riverine shells and animal bones.

*Sm-17.*—While digging the foundations and basement of Mr. W. P. Buchanan's ancestral home near Broadford, a series of 13 burials were found. If there were any grave goods no report was given.

The house sits on a 20 foot ridge forming an old bank of the North Fork of the Holston River. To the west of it was about half an acre planted in tobacco. We made a limited collection, but found no evidence of shells that might have been discarded by the aborigines.

Material collected: 1 Madison Triangular point, 1 Guilford Lanceolate point, 3 unclassified points, 1 end scraper, 1 Type I drill, 5 uniface scrapers, 1 graver, 129 chert flakes, 5 quartz flakes, 1 rhyolite flake, 2 ferruginous sandstone flakes, and 12 Radford Series sherds.

*Sm-18.*—This site is on the eastern bank of a small, unnamed creek, within the town of Seven Mile Ford on the western end of a low ridge. Only a small quantity of chips were scattered over an area 25 yards in diameter. The site is 1500 feet from the Middle Fork of Holston River.

Material collected: 23 chert chips, 1 rhyolite chip.

*Sm-19.*—The Rector Site has been mostly, if not entirely, destroyed in building Interstate Route 81 at Chilhowie. When we were there caterpillar tracks in parallel rows covered the ground, and in one place an 8-cubic foot hunk of dirt was all that was left to show how deep the village materials may have gone. Originally, I would estimate the compact village covered an acre or two, which now lies along Interstate 81 embankments as topsoil for growing anti-erosional cover, or is under the highway as roadway fill.

In addition to the shell, bone, sherds, and chips we collected, our informant said that *Oliva*, *Marginella*, conch, and bone beads had come from here. The site itself is on a secondary terrace of the Middle Fork of the Holston River.

Material collected: 1 Dallas Triangular point, 22 chert flakes, 1 rhyolite flake, 1 Grayson Series sherd, 139 Radford Series sherds, 3 Wythe Series sherds, and riverine shells and animal bones.

*Sm-20.*—It is rare to find a site in Southwest Virginia that has not been systematically searched by nearby collectors. This one is a small Archaic camp on the side of a hill composed of red clay about half a mile southwest of Catham Hill and about two-tenths of a mile from the North Fork of the Holston River. We were, so far as anyone in the vicinity knew, the only ones to have collected from it. The material was scattered over an area about 35 yards in diameter.

Material collected: 2 uniface scrapers, 3 biface scrapers, 2 backed knives, 6 knife fragments, 1 hand chopper, 1 Morrow Mountain I point, 1 Guilford Lanceolate point, 1 large blade fragment, 1 Bifurcated Base point, 1 Cache Diagonal Notched point, 5 unidentified points, 111 chert flakes, 1 quartzite flake, and 8 rhyolite flakes.

*Sm-21.*—In contrast to *Sm-20*, this Archaic site, only a short distance away, is well known to collectors, and frequently visited. It lies on the edge of an old secondary terrace of the North Fork of the Holston River which, here, has a sharp drop-off of about 20 feet. The materials were collected under the handicap of recent plowing, but the area of occupation appears to be about 25 by 50 yards.

Materials collected: 2 knife fragments, 1 Morrow Mountain I point, 1 Guilford Lanceolate point, 1 unidentified point, 13 chert flakes, and 2 rhyolite flakes.

*Sm-22.*—R. Crockett Gwynn of Marion owns a large corn field 2.5 miles west of Nebo in the angle between the North Fork of the Holston River and McDonald's Branch. Two burial areas, believed by local collectors to be unassociated with one another, are about 200 yards apart in the field. The one upstream we did not investigate, but the one closest to McDonald's Branch we did and designated it as *Sm-22*. This village site of 3 to 4 acres is on a sloping secondary terrace of the North Fork approximately 100 yards from the stream.

This area has been extensively dug by collectors from all over Virginia. Mrs. Robert Hays who lives next to the site spends hours walking the field in search of specimens. The following is information from one collector: "There were 10 to 12 shell gorgets on a child's burial; three sets of shell(?) "ear plugs"—more than on any other site; no celts; beads of all descriptions, including bear and wolf; occasionally flexed burials but mostly prone and extended; no child's burial was flexed." Another informant reported: "32 burials dug out in one day; among these were two children; the ribs of one child were in a pot with a gorget and several arrowheads; mortars and pestles; fully grooved axes; hammer-anvil stones; small triangular points (i.e. Clarksville Small Triangular), in high percentages; stone disks; *Oliva* and conch columella beads; flat small shell beads placed about wrists and ankles."

We saw in Mrs. Hay's collection round stone balls one inch in diameter; pottery disks of Radford Series pottery; "horn" shaped and straight stemmed clay pipes; strap handles without incisions at the rim; assorted rim sherds.

In another collector and trader's collection from the same site, we saw conch shell pendants of several shapes and sizes; "ear plugs" of several shapes; a cordmarked pot with strap handle but the series to which it belonged could not be ascertained. We collected a variety of materials from the surface of the village site.

Material collected: 1 drill fragment, 3 gravers, 1 used lamellar flake, 2 unused lamellar flakes, 2 un-

backed knives, 1 backed knife, 1 knife fragment, 1 core, 1 bear tooth, 2 unclassifiable worked bone objects, 2 Hamilton Triangular points, 2 Dallas Triangular points, 1 Halifax Sidenotched point, 3 point fragments, 239 chert flakes, 5 quartz flakes, 14 New River Series sherds, 173 Radford Series sherds, 1 Smyth Series sherd, 96 Wythe Series sherds, and riverine shells and animal bones.

*Sm-23.*—This is the Clark Site mentioned by Wedel (1951). It is about 1.5 miles southwest of Broadford and is well known to collectors, one of whom showed us the site location. After a thorough inspection we could find no artifacts, flakes, or other evidence of a site at this place.

*Sm-24.*—This burial cave is 0.3 mile northeast of *Sm-23* on the south slope of a ridge. There is a 3-foot opening dropping down 10 feet to a muddy ledge. A large tree, used for tying ropes in descent, grows at the mouth. We obtained human and other bones from the muddy floor of the ledge. It was reported by the local collectors that a 12-inch stone pipe came from the cave and is now in one of the New York City museums, and that gorgets, celts, and several other pipes had been found. However, we did not see any of these artifacts.

*Sm-25.*—Near one of the drained lakes of Saltville an aboriginal village site covered about 100 yards, of which the remaining western 10 to 15 yards are now under gardens and houses. Its location was on a ridge overlooking the low ground and lakes to the south and east. Pottery may be found in the athletic field of the R. B. Worthy High School and on the embankment west of the high school's grounds. The grey top soil still has village debris, and even the outlines of a pit may be seen. The collection we made was in the gardens atop the remaining ridge. The site has been well known and dug in by local collectors for years (Plate 7a, b).

An informant recalled the following characteristics of the site: It was 100 by 110 yards in size and there were many postmolds. There were probably 300 graves of which 75 percent were flexed, 23 percent prone, and 2 percent "scatter bones" (secondary burials?). Thirty-five to 40 stone and clay pipes, 30 pots, *Oliva* and *Marginella* shell beads, gorgets with turkey and rattlesnake design were found. There were very few stone-lined graves but one cyst had chipped and ground cutting tools, a flaking tool, a conical pile of *Marginella* shell at the head and tubular beads. Another burial is said to have had all the bones broken, accompanied by a "spud," beads, arrowheads in all stages of manufacture, flaking tools, platform pipe, and copper beads. The so-called "scatter bone" burials generally had no associated artifacts.



Material collected: 1 backed knife, 1 bone "beamer," 1 clay pipe, 1 unclassifiable worked stone object, 26 chert flakes, 11 New River Series sherds, 295 Radford Series sherds, 1 Smyth Series sherd, 5 Wythe Series sherds, 2 proximal deer phalanges of the "cup and pin" game, 2 drilled unclassified bone objects, and riverine shells and animal bones.

*Sm-26.*—A little over 2.5 miles south of Rich Valley High School, on a flat-top ridge is a village area where clay pipes and shell beads are associated with burials. It was discovered when our informant saw a circle of black ground from the highway about three-fourths of a mile away. In addition to the surface collection we also excavated a strata cut near the center of the site, hitting sterile subsoil at 8 inches. The only feature was a postmold 4 inches in diameter and 4 inches deep.

Material collected from the surface and excavated levels:

Surface: 1 graver, 2 lamellar flake scrapers, 2 used lamellar flakes, 1 unbacked knife, 3 knife fragments, 1 small celt, 1 shredder, 1 pottery disk, 1 clay pipe, 2 unclassified worked stone items, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Hamilton Triangular point, 1 Dallas Triangular point, 1 Lamoka point, 3 point fragments, 73 chert flakes, 1 quartz flake, 15 New River Series sherds, 361 Radford Series sherds, 10 Smyth Series sherds, 83 Wythe Series sherds, 7 unclassified sherds.

Level 0-6 inches: 1 hammerstone-millingstone, 2 point fragments, 4 chert flakes, 5 New River Series sherds, 70 Radford Series sherds, 2 Smyth Series sherds, 17 Wythe Series sherds, 1 unclassified sherd.

Level 6-8 inches: 1 unclassifiable worked-stone item, 3 chert flakes, 18 Radford Series sherds, 10 Wythe Series sherds.

Riverine shells and animal bones were also collected on the surface and in the excavated levels.

*Sm-27.*—Hailed as the most productive area for projectile points in the general area of Saltville, is a site on a protruding, rounded ridge between two creeks, a little over 7 miles east of Broadford. We were able to find only a few points due to the multitudinous collectors who, without permission of the owner, comb the site for points after each plowing and rain. Flakes were profuse.

Material collected: 1 Type III drill, 2 drill fragments, 3 used lamellar flakes, 1 unbacked knife, 5 backed knives, 2 knife fragments, 2 shredders, 1 gouge, 1 Madison Triangular point, 1 Morrow Mountain I point, 1 large blade fragment, 1 Dalton point, 1 point fragment, 2 unidentified points, 243 chert flakes, 1 quartz flake, and 1 ferruginous sandstone flake.

*Sm-28.*—"Madam Russell" Cave is a well-known landmark almost in the town of Saltville. It is said to

have been discovered in 1898. An informant states that a 7-foot overburden had been removed to get to a 1.5-foot layer, from which many burials had been excavated, as well as a vertebra with a notched stemmed projectile point in it, a skull with a small fragment of a point in it, 7 platform pipes, 6 other stone pipes, celts, and a rattlesnake design gorget. One platform pipe is said to have been 10 inches high with a 4-inch stem and is said to be in the Museum of the American Indian, Heye Foundation, New York City.

*Sm-29.*—On the right bank of the Middle Fork, a short distance from the Fox Site, *Sm-4*, is a small chipping area about 30 yards in diameter. The chips were widely scattered and rather uniformly of rhyolite. We were shown a few notched and stemmed chert points by the landowner.

Material collected: 17 chert flakes, 26 ferruginous sandstone flakes, 100 rhyolite flakes, and 1 unclassified pottery sherd.

*Sm-30.*—Numerous points have come from a small Archaic site on the opposite side of and upstream from the Fox Site, *Sm-4*. It is on a secondary terrace, about 20 by 50 yards in size, with some evidence of concentration in the northeast corner of the terrace. Pottery has never been found here.

Material collected: 1 used lamellar flake, 2 unbacked knives, 2 knife fragments, 1 hammerstone-millingstone, 3 hand choppers, 2 Savannah River Stemmed points, 1 Ledbetter point, 7 large blade fragments, 1 Bradley Spike point, 1 Palmer Corner Notched point, 56 chert flakes, 3 quartz flakes, and 137 rhyolite flakes.

*Sm-31.*—Known locally as the Buchanan Site, it is on a 6-foot high terrace on the North Fork of the Holston, 0.25 miles west of Rich Valley High School. I could not determine exactly upon which river terrace the site was situated. The large alluvial fill of the valley was in 4-foot high timothy pasture during our visit, and the outlines of the site, though indefinite, probably encompassed an acre or more.

The site has been extensively dug by collectors. An informant estimated 40 burials had been taken out in a week's time, and that altogether 200 had been removed. There were rattlesnake design gorgets, elk teeth beads, bone "hair pins," beads of rolled copper and turkey wing tips. These latter are said to be limited on the burials to below the waist.

Material collected: 1 graver, 1 large blade fragment, 12 chert flakes, 3 New River Series sherds, 173 Radford Series sherds, 4 Wythe Series sherds, and riverine shells and animal bones.

*Sm-32.*—One mile south of the North Fork of the Holston River, on a plateau at 2200 feet overlooking the river, is a village site. The nearest water is Campbell Creek, about 0.25 mile to the east. A mile and a

half south of the village is Walker Mountain with crests of 3300 to 3400 feet. The village area is flat, but outcroppings of weathered limestone protrude through the dense sod from which the village debris was recovered. The refuse could only be found in short erosional stretches and along animal paths. It is estimated the village was 50 by 75 yards in size.

Material collected: 4 used lamellar flakes, 1 unused lamellar flake, 1 knife fragment, 1 Morrow Mountain II point, 2 point fragments, 1 unidentified point, 41 chert flakes, 2 quartz flakes, 1 New River Series sherd, 161 Radford Series sherds, 9 Wythe Series sherds, and riverine shells and animal bones.

*Sm-33.*—This site is on Southwestern State Hospital property, north of Interstate Route 81. Two reliable informants reported burials and pottery, and we were shown a 12-inch long platform pipe said to have been associated with a child's burial. Burials are said to occur under stones and some are associated with "conch shell beads." Two visits to the site produced no artifacts because the area was overgrown with weeds as high as our heads and the ground between was covered with a deep accumulation of dead plants.

*Sm-34.*—This cave, about one-half mile from *Sm-10*, is reported to have a vertical chimney, now silted over. Although we did not see the site, we were shown *Marginella* and *Oliva* shell beads purported to have been associated with burials from the cave.

### Tazewell County

*Tz-1.*—Caldwell's Crab Orchard Site (1951) is Site Tz-1, located about 300 yards from Clinch River west of Tazewell on a wide, slightly rolling plain. Caldwell described and illustrated material from an excavation made by the owner, Mr. Jeff Higginbotham, that was donated to the archeology collections of the U.S. National Museum. This additional site information may be given: The area of occupation, not really seen for the last 50 years because it has been covered with grass, is said to have crisscrossing black lanes, rather than the usual circular pattern of charcoal-stained earth. There is a shallow gully at the western edge, a so-called "swag" in which Mr. Higginbotham feels material has been deposited by erosion because it is deeper here than elsewhere. Since several other groups had dug in the "swag," it was decided to put our strata cut further east on the flatter land. This resulted in finding an occupational depth of 12 inches. The grey artifact-bearing soil ended abruptly in a red, sterile clay (Plate 8a, b).

Material collected from Level 0–6 inches: 1 knife fragment, 1 unclassifiable worked stone object, 1

Levanna Triangular point, 1 point fragment, 75 chert flakes, 2 New River Series sherds, 65 Radford Series sherds, and 4 Wythe Series sherds.

Material collected from level 6–12 inches: 1 core, 4 Madison Triangular points, 2 Levanna Triangular points, 1 point fragment, 26 chert flakes, 70 Radford Series sherds, 2 Wythe Series sherds, and animal bones.

*Tz-2.*—Caldwell's Cecil Farm Site (1951) is now known locally as the Mays Site. Since the time Caldwell wrote his notes on the material gathered from this site, there have been numerous collectors who have dug into it. It is said the collectors did not reach the bottom of cultural deposits until they were up to their armpits. Burials and fireplaces were encountered, but no adequate description of either, or of artifacts, could be obtained. The occupied zone is 2 to 4 acres in extent. It lies on a sloping secondary terrace adjacent to Clinch River, west of Tz-1.

Material collected: 1 pottery disk, 1 reamer, 1 Hamilton Triangular point, 2 point fragments, 45 chert flakes, 18 New River Series sherds, 348 Radford Series sherds, and animal bones.

*Tz-3.*—On the south or left bank of Clinch River in front of Mr. Jeff Higginbotham's home is a small cave-like shelter 30 feet above the river. The fan at the entrance is small, measuring only 6 by 10 feet, but by digging here, and screening the dirt Mr. Higginbotham found enough pottery to put together several large size, subconical Radford Series pots with strap handles.

*Tz-4.*—A thinly scattered chipping site was discovered on the east slope of a small valley southeast of Tz-1 and Tz-3. It is about 10 yards wide and 100 yards long.

Material collected: 1 unbacked knife, 3 Madison Triangular points, 22 chert flakes, and 1 rhyolite flake.

*Tz-5.*—This is the Higginbotham Cave, reported by Caldwell (1951). It is a burial cave with a vertical shaft, now closed over so that cattle will not fall into it. In addition to a large number of burials, beads and platform pipes were found here. It lies about two-thirds of the way up a hillside rising from Clinch River, and is geographically closely associated with Sites Tz-1, Tz-2, and Tz-3.

*Tz-6.*—Burke's Garden, an elliptical, isolated valley entirely surrounded by mountains, was lived in by both ceramic and nonceramic groups. Wainwright (1915) reported an acre of shell, which I have assumed was similar to others outside Burke's Garden, that is pottery bearing. In trying to follow up Wainwright's reconnaissance we did not find the shell field, but did find a very scattered nonceramic site one mile east of the post office, the location given

by Wainwright for the shell field. In this immediate vicinity a local collector is supposed to have dug out pottery and shell. It lies on a 20 foot high terrace above Snyder Branch.

Material collected: 2 unbacked knives, 2 knife fragments, 1 Madison Triangular point, and 86 chert flakes.

*Tz-7.*—In Ward's Cove, about 1.5 miles south of Maiden Spring Tunnel, is an aboriginal village from which the following materials are said to have come: 50 burials, all flexed and without any stone artifacts; many beads and shell gorgets; one 9-inch plain gorget (stone?); two types of shell gorgets, one with a circle and the other with a turtle design; "crying-eye" pipe bowl, found on the surface; all types of projectile points; and two shell effigy turtles.

The village lies on the floor of a valley near which are numerous caves, none of which have yielded artifacts. The only known source of water nearby is a vertical-shaft cave, immediately adjacent to the village, that has a stream running through it. The flowing water may be heard at the entrance of the cave, and it is only a matter of lowering containers to fill them with water.

Material collected: 1 Type I-drill, 1 biface scraper, 19 chert chips, 55 New River Series sherds, 61 Radford Series sherds, 2 Wythe Series sherds, and riverine shells and animal bones.

*Tz-8.*—Mr. W. W. Bane loaned us a collection of material that he had obtained from a stone and dirt grave containing at least three burials. The circular cairn was 15 feet in diameter and 1 to 1.5 feet high in the center, placed upon the surface. It was filled with flat, small cobbles, intermixed with dirt. Mr. Bane did not know the arrangement of the burials. The cairn, one of two, is on the peak of a ridge about a mile south of Claypool Hill. Among the associated grave goods were pottery, four celts, a fully grooved ax, stone ball 2.5 inches in diameter, what appear to be glazed marbles made of clay, a stone gorget with the suspension hole in the middle and drilled from both sides, one large stemmed blade, one triangular blade, and a large oval blade (cf. Plates 23*n*, 26*r-t*).

Material analyzed: 16 Radford Series sherds.

*Tz-9.*—Another burial cairn, this one associated with trade goods, was located by Mr. Bane 3 miles south of Cedar Bluff. Like *Tz-8*, it is composed of flat stones and dirt, and is about 15 feet in diameter while its height is 1.5 feet. It too lies on the edge of a high ridge (Plate 9*a*).

Mr. Bane does not know how many burials were in this cairn, presumably only one. He found one and a half blue glass beads, 20 brass beads on a cotton string, a quarter-inch-thick plate of mica, and an amethyst crystal.

*Tz-10.*—A third burial area, similar to *Tz-8* and *Tz-9*, is present on a ridge almost 2.5 miles south of Claypool Hill. This was opened around 40 years ago. Like the other two, it is composed of the same type of material of flat stones and dirt and is 15 to 20 feet in diameter and 1 to 2 feet high. Nothing is known of the contents.

*Tz-11.*—Little River, one of the three rivers by the same name encountered during the survey of southwest Virginia, enters Clinch River southwest of Cedar Bluff. On the north or right bank of the stream 2.5 miles south of Claypool Hill an area of chipping was found that could not be examined adequately due to the heavy sod. We were able to find chips and a few points, and a single river snail shell in animal paths.

Material collected: 1 Type I drill, 1 Levanna Triangular point, 1 Bifurcated Base point, and 60 chert flakes.

## Washington County

*Wg-1.*—The name "Keywood" has been applied to this large village from an almost nonexistent town nearby. It is situated on a plateau-like spur from Walker Mountain to the south, covering 4 to 5 acres. The site has been partly destroyed by road building and greatly dug into by local collectors. Wedel (1951) visited it in 1940 and the 109 sherds he collected were analyzed later by Evans (1955, pp. 18, 150).

Collectors report that everything seems to be well preserved, i.e., the beads are "slick," not deteriorating nor chalky. Among the finds they recall beads of all kinds, 4 to 5 steatite pipes, a platform pipe and clay pipes. Not many gorgets of shell(?) have been discovered here, and a comb (?) made from a clam shell is somewhat unique.

Material collected: 1 used lamellar flake, 1 backed knife, 1 pottery disk, 1 unclassifiable worked stone object, 1 Madison Triangular point, 1 point fragment, 47 chert flakes, 1 rhyolite flake, 284 New River Series sherds, 1 Grayson Series sherd, 355 Radford Series sherds, 2 Smyth Series sherds, 25 Wythe Series sherds, 1 unclassified sherd, and riverine shells and animal bones.

*Wg-2.*—A mile east of De Busk Mill the land slopes upward and northward from the Middle Fork of the Holston River. We were told there was a blackened circle on this slope, which had been dug into by local collectors but with unknown results. We did not find the circle initially, but did find an area of extensive chipping without any evidence of pottery. Finally, on the eastern side of the chipping zone that covered several acres there were a few potsherds. It is possible that we did not actually discover the habitation zone.

Material collected: 1 uniface scraper, 1 unbacked knife, 2 backed knives, 1 core, 1 gouge, 1 reamer, 1 unclassified worked stone object, 1 Hamilton Triangular point, 1 large blade fragment, 1 unidentified point, 200 chert flakes, 1 quartz flake, 1 quartzite flake, 8 rhyolite flakes, 1 Grayson Series sherd, 33 Radford Series sherds, and 2 Wythe Series sherds.

*Wg-3.*—A faded, yellow newspaper clipping without date was given me by Mr. William Nye of Dublin. It tells the story of two men who entered a cave on the property of Eugene Dutton 4 miles north of Abingdon, and brought out a series of skulls and skeletal parts. A photograph shows one of the skulls with two holes in it being held by Madeline Kneberg. The article says no ornaments were found, but a local informant tells me a platform pipe, another large pipe, and a shell gorget with a rattlesnake motif have come from the cave.

The cave has a vertical shaft, said to be 200 feet deep and an adequate opening for entrance at the surface. This opening is now completely covered by brush thrown on it by the owner.

*Wg-4.*—North and east of *Wg-3* across Hogthief Creek is a village without the usual characteristics of discarded shell and charcoal-stained earth. It is situated on a primary sandy terrace of Hogthief Creek, about 75 yards from the creek. The area of occupation is indefinite but probably 50 by 75 yards in size. Chips were numerous, but pottery was so scarce we visited the site twice to make an adequate collection. State Route 694 has been built directly through the site, which has been extensively dug into by collectors. We saw one small, right angle pipe said to have come from here. The local collectors report finding graves, and among the artifacts they recall a slate gorget.

Material collected: 1 Type I drill, 1 Type II drill, 3 used lamellar flakes, 2 unbacked knives, 1 backed knife, 1 core, 1 gouge, 1 reamer, 2 unclassified worked stone objects, 1 Levanna Triangular point, 1 Hamilton Triangular point, 1 Potts point, 5 point fragments, 2 unidentified points, 305 chert flakes, 5 quartz flakes, 3 rhyolite flakes, 1 unclassified flake, 12 New River Series sherds, 94 Radford Series sherds, 1 Smyth Series sherd, and 8 Wythe Series sherds.

*Wg-5A and Wg-5B.*—The Middle Fork of the Holston River has formed a large alluvial plain about a mile southeast of Edmondson Dam. Floods have eroded channels through it, scouring away part of the Archaic occupation that once covered a large portion of the plain. In those areas resisting erosion, chips are profuse. We divided the area into two sectors, a western one designated "A", and a southeastern one designated "B." This site has been subject to extensive collecting activity.

Material collected from *Wg-5A*: 1 graver, 1 uniface scraper, 2 unbacked knives, 6 backed knives, 1 knife fragment, 1 core, 1 unidentified point, 161 chert flakes and 2 quartz flakes.

Material collected from *Wg-5B*: 58 chert flakes.

*Wg-6.*—A productive and well-known Archaic campsite, frequently visited by local collectors, lies in the valley of an unnamed creek 3.5 miles north of Damascus. The occupied area was on both sides of the creek, both on the primary and secondary terraces. The main section of the site is south of the creek, on the secondary terrace, an area that we were not able to examine because of the wheat crop. We were able, however, to collect from the north side where the primary terrace was identified, even though the area was planted in corn at the time of our visit. The occupation area is defined by the profusion of chips and points, covering an acre.

Material collected: 1 Type I drill, 1 biface scraper, 1 backed knife, 1 Lamoka point, 1 unidentified point, 144 chert flakes, 1 quartzite flake, and 1 rhyolite flake.

*Wg-7.*—One must cross the South Fork of the Holston River via a cable car to get to this village. Located on a secondary terrace of the South Fork, 3 miles north of Damascus, the site was inaccessible at the time of our visit except at the edges of the terrace because of a mature wheat field. From descriptions given by local collectors the village area is about 2 acres in extent, has been dug into many times over the years, and the number of burials encountered is unknown.

Material collected: 1 lamellar flake scraper, 1 hammerstone-millingstone, 1 Madison Triangular point, 2 point fragments, 85 chert flakes, 2 flakes of unidentified stone, 139 Radford Series sherds, 13 Smyth Series sherds, 19 Wythe Series sherds, and riverine shells and animal bones.

*Wg-8.*—On a large bottomland of the north or right bank of the South Fork of the Holston River about 1.5 miles north-northwest of Damascus, informants have reported an area of chip and point concentration. It is probably 5 acres in size, of which we were able to observe only an acre in the very middle because the remainder was in tall wheat. We found no pottery. The site is intensively and constantly searched by local collectors.

Material collected: 1 unbacked knife, 2 knife fragments, 1 shredder, 1 large blade fragment, 180 chert flakes, 6 quartz flakes, and 2 flakes of unidentified stone.

*Wg-9.*—A 3 to 4-foot terrace lies between a swamp and Hutton Creek where the latter approaches Route 11, 2 miles west of Chilhowie. In an area of about an

acre on this terrace a large number of points have been recovered, and we found many flakes.

Material collected: 1 backed knife, 1 knife fragment, 1 Ledbetter point, 94 chert flakes, and 3 quartz flakes.

*Wg-10.*—Known variously as the “Mendota” or “Kinderhook” Site, the collectors from Saltville claim Wg-10 to be one of the largest sites of which they know. Many of the burials had been encased in flat stones. In fact the walkway to the tenants’ home is paved with stones taken from these burials. Informants have offered the following data: All skeletons were prone and unflexed. As many as 80 of the estimated total of 400–500 were exhumed by one collector. One burial had the face covered with mica and was accompanied by three celts, one of which was in the skeleton’s mouth. Another burial was 6 feet below the present surface, under a large flat stone, and was represented by a single baby’s tooth, nine long triangular projectile points, a flint knife, a “spud,” a pipe 12 inches long, an iron ax, and red ochre. The village is “lousy with discoidals,” and artifacts of quartz crystals, platform pipes, and steatite non-platform pipes have been found. Beads of all kinds were found and one grave had enough beads (*Marginella* shell) to fill 42 2-foot strings. Stone discoidals are said to have central concavities or crosses.

The name “Mendota” is derived from the town of that name nearby on the North Fork of the Holston River. The aboriginal village is situated in the center of a large U-bend of the river, on the highest land available. It probably covers 3 or 4 acres, but this was not confirmed at the time of our visit due to clover cover.

Material collected: 1 Type I-drill, 1 Type II drill, 1 used lamellar flake, 1 unbacked knife, 1 hand chopper, 1 stone disk, 1 pottery disk, 1 clay pipe, 2 unclassified worked stone objects, 2 Madison Triangular points, 1 Levanna Triangular point, 3 point fragments, 98 chert flakes, 1 unclassified flake, 11 New River Series sherds, 253 Radford Series sherds, 6 Wythe Series sherds, and riverine shells and animal bones.

*Wg-11.*—Mr. F. W. Sproles lives in the middle of an aboriginal village site on the North Fork of the Holston 4.5 miles upstream from Mendota. The site is on the secondary terrace of the left bank of the river, and covers an area of sandy soil about 100 yards in diameter. He has dug extensively in his site and has permitted others to share this activity with him. He reports the following information about the finds here: burials are prone, or laid on the side and extended generally, but a few are flexed; more children’s graves are found than adults; about one grave in four will have associated grave goods, this

is particularly true of children’s interments; frequently, a stone is placed above and below the skeleton; mica was found on the head of one individual. Mr. Sproles showed us a few of the artifacts reportedly found on the site, either as grave goods or part of the village fill. Among them were polished stone disks with a central concavity and crosses; conical and tubular copper beads; stone balls about 1.25 inch in diameter; a thin cordmarked Radford Series pot; clay and stone pipes; T-shaped drills; thin, flat shell beads; bear claws and wolf teeth; problematical curved objects of stone. He also reported finding triangular projectile points, a few *Oliva* shell beads, hammer-anvil stones, quartz crystals, stone gorgets, and shell gorgets with “rattlesnake” design, some of which are fenestrated.

Material collected: 1 stone pipe, 1 hammerstone-millingstone, 1 stone disk, 1 pottery disk, 1 clay spoon, 1 gouge, 2 unclassified worked stone objects, 1 Bifurcated Base point, 1 point fragment, 51 chert flakes, 1 unclassified flake, 450 Radford Series sherds, 6 Smyth Series sherds, 30 Wythe Series sherds, and riverine shells and animal bones.

*Wg-12.*—We attempted an investigation of a village located on the secondary terrace of Town Creek a mile south of Abingdon, but were greatly handicapped by the presence of tall rows of corn. The site is well known to collectors, who have dug out burials and associated materials but have not recorded them. Occupation appears to have been about 50 yards in diameter judging by blackening of the sandy soil and distribution of village debris. We visited the site after collectors had been digging between the corn rows, and some of the left-overs from their digging are also included in the collection.

Material collected: 1 used lamellar flake, 1 hammerstone-millingstone, 1 reamer, 1 unclassified worked stone object, 1 Dallas Triangular point, 2 point fragments, 71 chert flakes, 154 Radford Series sherds, 2 Wythe Series sherds, 1 Smyth Series sherd, and riverine shells and animal bones.

*Wg-13.*—In constructing the western approach to Wrights Bridge across the South Fork of the Holston River several burials were encountered. It seemed to us that most, if not all, of the village had been destroyed. The cultural materials that we recovered in erosional ditches and along the embankment to the bridge represented the only remaining vestiges of a small village.

Material collected: 1 unclassifiable worked stone object, 1 Hardaway Sidenotched point, 1 Grayson Series sherd, 94 Radford Series sherds, 3 Smyth Series sherds, 4 Wythe Series sherds, 1 unclassified sherd, 54 chert flakes, 2 rhyolite flakes, and riverine shells and animal bones.

*Wg-14.*—We were not able to visit this burial cave but it is locally well known. The entrance is on the western slope of a hill approximately 1.5 miles north of Damascus at about 2000 feet above sea level. Burials and a variety of artifacts, whose types unfortunately are unknown, are reported to have been taken from it.

*Wg-15.*—After considerable persuasion that we were not going to dig on their property, Messrs. Frank and George Osborne allowed us to collect from a large village that is situated in a bend of the North Fork of the Holston River about 2.5 miles northeast of Mendota. The large plain is 20 feet above the river, and the village appears to have been placed on the secondary terrace. The actual size of the village seems to be 3 to 4 acres, but this is a guess since a portion of the site was in clover and could not be surveyed. Many collectors have dug here and a large number of burials removed, just how many is totally unknown. The type of burial goods is a matter of conjecture, but reported are turkey wingtips, celts, shell gorgets, bone and shell beads, and pipes. One burial of eight, dug by a local collector, is said to have been a female in prone position with a child in her arms (Plate 9b).

Material collected: 1 backed knife, 1 knife fragment, 5 hammerstone-millingstones, 1 reamer, 1 unclassifiable worked stone object, 1 Clarksville Small Triangular point, 1 Patrick Indented Base point, 2 unidentified points, 317 chert flakes, 1 New River Series sherd, 435 Radford Series sherds, 2 Smyth Series sherds, 3 Wythe Series sherds, and riverine shells and animal bones.

*Wg-16.*—Known as the "Dye Site" after the owner, Mr. Clyde Dye, this village is about an acre in extent. It was placed on the secondary terrace of the North Fork of Holston River, 2 miles west of Holston. It has been dug into many times by collectors, some of whom, after disinterring the bodies, dumped the bones into the river. What was associated with these burials is unknown, but the collectors report that the burials were flexed and had bear teeth beads, pots and celts.

Materials collected: 1 used lamellar flake, 1 Madison Triangular point, 1 Dallas Triangular point, 2 point fragments, 55 chert flakes, 1 quartz flake, 5 New River Series sherds, 470 Radford Series sherds, 10 Smyth Series sherds, 9 Wythe Series sherds, and riverine shells and animal bones.

*Wg-17.*—A burial cave is near Wg-16 from which gorgets are supposed to have been found. We did not locate the cave and no other details were available from the local collectors.

## Wise County

*Ws-1.*—Mr. Charles Stallard some years ago had excavated a rockshelter next to his home, 2.5 miles east of Wise. The shelter is one of several in a limestone ledge about 0.1 mile long, but the only one containing artifacts. It is 12 to 15 feet high and has a square living space of 10 to 15 feet wide in both north-south and east-west directions. The dirt had been sifted through a screen and piled at one of the entrances after sifting. There is no information as to how far down in the floor cultural debris extended. Mr. Stallard does remember that the pottery was near the surface and stone artifacts were beneath the pottery.

Material analyzed: 70 Radford Series sherds and 1 Wythe Series sherd.

*Ws-2.*—Mr. Charles Stallard loaned to the survey 10 unclassified sherds of pottery from a rockshelter located on the east side of Guest River about 2 miles north of the junction of the Clinch and Guest Rivers.

*Ws-3.*—A well-known archeological site in Coeburn is called "Cowboy Kelly's Cornfield." It is said to have produced points, pottery, and "other things." At the time of our visit the site was covered with morning glories, beans, and corn. As a consequence, we were able to find only a few chert chips.

## Wythe County

*Wy-1.*—Evans (1955, p. 13) describes the Cornett Site from unpublished notes made by Howard A. MacCord in 1948 and the artifacts from the collection of Dr. C. A. Michaels. The site is a half mile from Austinville on the left or north bank of New River. It is on the sandy, secondary terrace, about 2 acres in size, with large amounts of charcoal in the soil. In addition to the materials listed by Evans as positively coming from the site, other artifacts, allegedly from here, include fishhooks of bone, "tomahawks" or fully grooved axes, copper beads, shell gorgets, columella beads, and celts. The site has been extensively excavated by local collectors. We made a surface collection.

Material collected: 1 graver, 1 backed knife, 1 Madison Triangular point, 1 Levanna Triangular point, 1 Bifurcated Base point, 1 point fragment, 13 chert flakes, 8 quartz flakes, 7 Radford Series sherds, 239 Wythe Series sherds, and riverine shells and animal bones.

*Wy-2.*—Three hundred yards downstream from Wy-1 a scattered, small collection of artifacts was encountered that appeared to have no geographical



connection with the Cornett Site (Wy-1). These were kept separate, and the area designated Wy-2. It is on the same terrace formation as Wy-1, in an area 50 by 20 yards.

Material collected: 1 Levanna Triangular point, 7 chert flakes, 1 quartz flake, 9 Radford Series sherds, and animal bones.

Wy-3.—From information furnished by Howard A. MacCord (personal communication) we visited this village in the company of a local collector who has dug extensively in it. It lies on the east or left bank of Reed Creek, about 200 yards from the confluence with Cove Creek. It was difficult to determine the terrace formation with certainty. Among the material in the local collectors' possession and said to have come from graves in this site are: a platform pipe, a deer ulna awl; elliptical, triangular, square, and circular shell gorgets; 2-inch cylindrical copper beads; *Marginella* beads; a grooved ax; numerous celts, one of which was of channel coal; bone needles; short conch columella beads; a clay pipe; turkey wing ornaments; a pot with constricted neck 12 to 18 inches tall, and bowl-shaped pots. The burials are said to have been extended and laid in rows. Our work at the site was limited to surface collection.

Material collected: 2 unbacked knives, 1 pottery disk, 1 unclassified worked stone object, 1 Madison Triangular point, 2 point fragments, 2 unidentified points, 79 chert flakes, 2 quartz flakes, 2 New River Series sherds, 90 Radford Series sherds, 124 Wythe Series sherds, and riverine shells and animal bones.

Wy-4.—This village site is in the same general locality as Wy-3, but 200 yards east of Cove Creek and 700 yards from the confluence of Cove Creek with Reed Creek. The site is scattered over an area 75 yards wide and 150 yards long, with no shell in the refuse.

Materials collected: 1 Type I drill, 1 graver, 1 backed knife, 1 unclassified worked stone object, 2 Madison Triangular points, 2 Levanna Triangular points, 1 large blade fragment, 3 point fragments, 2 unidentified points, 112 chert flakes, 3 quartz flakes, 5 Grayson Series sherds, 1 New River Series sherd, 42 Radford Series sherds, and 17 Wythe Series sherds.

Wy-5.—Within the town of Ivanhoe, on the west or left bank of New River there is a narrow sandy primary terrace on which a village was located. The entire area had been plowed the day before my visit, and it was not possible to establish with accuracy the size of the occupied zone, but was probably not more than 75 yards in diameter.

It is possible this site was mentioned by Mercer (1894, p. 285) when he referred to "The riverside

village sites often contain mica as we learned at Indian Creek, Cotton Hill and Summer's Creek, and the mounds midway in the mountains. . . ."

Material collected: 2 Type I-drills, 1 unbacked knife, 1 hammerstone-millingstone, 1 Madison Triangular point, 1 Levanna Triangular point, 3 point fragments, 60 chert flakes, 14 quartz flakes, 3 Grayson Series sherds, 99 Radford Series sherds, 43 Wythe Series sherds, 2 unclassified sherds, and riverine shells and animal bones.

Wy-6.—On a highly distinctive secondary terrace, south of the right bank of Cripple Creek and southwest of Route 94 there is an Archaic occupation site. The flakes and artifacts are scattered on the site over an area about 100 yards in diameter.

A few potsherds were found on the extreme western edge of the site, which is on the primary terrace 5 to 6 feet lower than the flat, sharply demarcated secondary terrace. It is possible that under better collecting conditions more of this later occupation could have been found but the area was in wheat and could not be entered.

Material collected: 1 drill fragment, 1 uniface scraper, 1 used lamellar flake, 2 unbacked knives, 5 backed knives, 2 knife fragments, 1 fully grooved ax, 1 core, 3 hand choppers, 1 shredder, 1 Ledbetter point, 2 Savannah River Stemmed points, 1 Morrow Mountain I point, 1 Morrow Mountain II point, 1 Perkiomen Broad Spear point, 1 Big Sandy Side-notched point, 2 Guilford Lanceolate points, 1 point fragment, 4 large blade fragments, 2 unidentified points, 109 chert flakes, 21 quartz flakes, and 25 rhyolite flakes.

Wy-7.—This site, Castle Farms, on the right bank of New River near Austinville has a large bottomland across the river from Wy-1 and Wy-2. It appears to be a primary terrace, and when I visited it only a 10-yard strip, 200 yards long paralleling the river in the middle of the bottomland, produced any artifacts. The area closer to the river was in such heavy sod nothing could be found; further inland the area was devoid of artifacts.

Material collected: 1 Type I drill, 1 unbacked knife, 1 reamer, 2 Madison Triangular points, 1 Levanna Triangular point, 1 Dallas Triangular point, 1 point fragment, 64 chert flakes, 3 quartz flakes, 4 Grayson Series sherds, 17 Radford Series sherds, and 28 Wythe Series sherds.

Wy-8.—Seven and a half miles west of Wytheville a village had been located 25 feet above Reed Creek on the secondary terrace of the creek. The artifact distribution covers at least an acre but is not evenly distributed over the entire site, but in various clusters

ten to fifteen feet in diameter. Very little shell was in the refuse.

Material collected: 1 Type I-drill, 2 Type I drills, 1 Type III drill, 1 drill fragment, 1 hafted scraper, 1 uniface scraper, 1 biface scraper, 1 shaped pounder, 1 used lamellar flake, 1 adze, 4 unbacked knives, 7 backed knives, 1 knife fragment, 1 hammer-stone-millingstone, 1 atlatl weight, 3 cores, 1 stone disk, 2 gouges, 5 unclassified worked stone objects, 1 Madison Triangular point, 3 Levanna Triangular points, 2 Hamilton Triangular points, 2 Savannah River Stemmed points, 1 Guilford Lanceolate point, 1 Morrow Mountain I point, 2 Bifurcated Base points, 3 point fragments, 2 unidentified points, 85 chert flakes, 1 rhyolite flake, 191 Radford Series sherds, 21 Wythe Series sherds, 1 unclassified sherd, and riverine shells and animal bones.

*Wy-9.*—An Archaic site, consisting of scattered flakes and a few projectile points, is on a low ridge about a half mile east-northeast of the confluence of Reed Creek and Mill Creek. This location overlooks the village designated as Wy-8.

Material collected: 1 used lamellar flake, 1 unbacked knife, 3 backed knives, 1 hand chopper, 1 stone spokeshave, 1 shredder, 1 Levanna Triangular point, 1 Bifurcated Base point, 1 Saratoga Parallel Stemmed point, 1 large blade fragment, 1 point fragment, 127 chert flakes, 4 quartz flakes, 1 quartzite flake, and 15 rhyolite flakes.

*Wy-10A and Wy-10B.*—This site, in the neighborhood of Wy-8 and Wy-9, is 0.1 mile east of Reed Creek, which at this point flows south to join Mill Creek. The site lies on a terrace 40 feet above Reed Creek and covers about an acre. The site was divided into an eastern half designated as "A" and a western half designated "B."

Material collected from Wy-10A: 1 used lamellar flake, 1 knife fragment, 1 Lamoka point, 1 Big Sandy Sidenotched point, 1 Saratoga Parallel Stemmed point, 1 Wheeler Incurvate point, 1 large blade fragment, 159 chert flakes, 4 quartz flakes, and 37 rhyolite flakes.

Material collected from Wy-10B: 1 lamellar flake scraper, 1 uniface scraper, 2 biface scrapers, 4 unbacked knives, 3 backed knives, 4 knife fragments, 1 shredder, 2 Levanna Triangular points, 3 Savannah River Stemmed points, 1 Bifurcated Base point, 1 Patrick Indented Base point, 6 large blade fragments, 161 chert flakes, 3 quartzite flakes, 20 ferruginous sandstone flakes, and 1 flake of unidentified material.

*Wy-11.*—In years past Dr. Sherman Dutton has collected a great deal of material from the field immediately in front of his family home, about a mile from old Mt. Airy on Huddle Creek. The area of artifacts covers 3 or 4 acres of slightly rolling land that appears to be a secondary terrace of the creek. When we visited the area it was covered with wheat stubble, making collecting difficult.

Material collected: 1 uniface scraper, 1 used lamellar flake, 1 Lamoka point, 1 large blade fragment, 1 point fragment, 49 chert flakes, and 4 quartz flakes.

*Wy-12.*—On the eastern slope of a ridge, 100 feet above the valley of Shorts Creek at Poplar Camp, and 0.3 mile from the stream is an Archaic settlement. This site has a uniquely large number of red jasper flakes without a single worked item of the same material.

Material collected: 1 Type III drill, 1 backed knife, 3 Guilford Lanceolate points, 1 Big Sandy Sidenotched point, 3 chert flakes, 31 quartz flakes, and 86 red jasper flakes.



# The Pottery Study

## METHODOLOGY

Analysis of all 21,808 sherds (Appendix: Table 1) would have been carried out at one time leaving all sherds out for comparative purposes, if sufficient laboratory space had been available. It was necessary, however, to analyze the sherds in two main groups. The collections made in 1963, representing the ceramic material from the western part of the survey were analyzed first, while the collections from the eastern section, made in 1964, were analyzed next. This arbitrary procedure may have introduced some minor typological errors, particularly in the sand-tempered series that occurs as traces in collections from the western portion and were difficult to separate. It should not, however, affect the typology of the more distinctive and more common sand-tempered series of the eastern area, nor the other varieties tempered with crushed stone and shell.

Initially, the sherds were sorted on a basis of temper: sand, limestone, shell, soapstone, and crushed stone other than limestone (usually an igneous rock). For those sherds having leached temper an attempt was always made to determine whether the resulting holes were flat and thin, often flaky (as would be associated with crushed shell temper), or cuboid, pyramidal, trapezoidal, or irregular, as would be associated with crushed limestone particles. It is believed the relationship between the types of holes and the original temper of the sherds was worked out with reasonable accuracy, especially when other characteristics of the pottery were kept in mind so that eroded sherds could be classified. On breaking the sherds, only partially leached fragments of temper in the interiors could be identified with an 8-power hand lens. Furthermore, the paste surrounding the holes often showed the molded casts of the laminated

exteriors and whorls of the shells. Limestone with fossilized shell in the matrix did not show this condition since lamina and whorls were less distinct in the calcareous matrix.

After sorting by temper, the sherds were then subdivided on a basis of exterior treatment and, at the same time, observations were made regarding surface color, paste characteristics, colors and interior treatment. In the descriptions of exterior surface treatments the brief definitions given by Evans (1955, pp. 25-27) have been followed with elaboration as befitted the material. While there was little difficulty sorting according to surface treatment for the vast majority of the sherds, a few presented problems. Sherds damaged by erosion to the extent that exterior markings could not be elicited or identified, were classified by series and placed in the "unclassified" category. A few sherds had rough, often well-marked exteriors, but neither bright, slanting light nor plasticine clay casts revealed a definitive set of impressions. This difficulty in classification was the product of several different factors: crumpling a net or fabric; repeated application; hand swiping. The pattern of some curvilinear stamped sherds could not be identified because the sherds were so small that only a partial, imperfect imprint remained. The resolution of these problems was to use whatever small clues the surface treatments provided, as well as secondary considerations such as paste characteristics, and when all failed, to place the sherds in the "unclassified" group.

Colors have not been described by comparisons with published color standards, such as Munsell Color Chart, but by the simple descriptive terms, such as tan, red, orange etc., learned from childhood in our society. This is the less exact way of presenting

this element of analysis, but any more precise standard has no cultural significance. By using the terms with collectors in the survey area it was discovered that all of us were using similar words to describe similar surface, and paste color characteristics.

Hardness was determined by the scratch tests using Moh's scale. The range of hardness into which the various series fall, 2.5–3.5, is so narrow the test has limited diagnostic value. This is especially noticeable since the range of hardness in any one pottery series spreads across the range for all the other pottery series in question. There are exceptions. For example, steatite-tempered series found in the survey area has a hardness of 3.5 as compared with the steatite-tempered Marcey Creek Series, found to the north and east, with a hardness of 1.5–2.0 (Evans, 1955, p. 55). The hardness factor serves to separate the two series.

Following the paste and surface studies are two levels of analysis in regard to vessel shape and size. The definitive one is derived from observations made on partially or completely restored vessels, which leave no doubt as to shape and dimensions. Few vessels, however, were even partially restorable, thereby limiting the usefulness of this analytical technique. The less definite analysis is based on the sherd samples. Here rims, profiles, body contours, bases, and rim and body diameter measurements provide the data for a reconstruction of the form, to be compared when possible with the complete vessel or those put together from sherds.

The next step was to distinguish various series. Evans' "A Ceramic Study of Virginia Archeology" (1955) has been out-of-print for years and yet the basic descriptions of series and types are essential for those working in Mid-Atlantic archeology. Several of his pottery series, namely New River and Radford Series, and their respective types are important to this study. Therefore with the permission of the author and the Smithsonian Institution these are reprinted in toto with minor additions where necessary. In addition the Dan River Series described by Coe and Lewis (1952) is also found in the area. In this case analyzing the pottery sample led me to describe this series as it was found throughout the survey area since Coe's and Lewis' sample came from only one site, site Rk<sup>v</sup>1, in Rockingham County, North Carolina. There should be little difficulty in seeing the similarity between the two descriptions.

These previously published descriptions did not account for a large portion of the total sherd sample; therefore, it was necessary to describe new ones. The methodological approach used here has been described in detail by Phillips, Ford, and Griffin (1951, pp. 61–69) and concisely stated by Evans (1955, p. 38):

It was soon observed that in many cases the surface treatment was the only variation, while the paste, temper, firing conditions, shape, and rim profiles remained constant. . . . This recurrence of surface treatment on different paste features necessitated the application of a term to designate a group of pottery types which are closely related because of basic similarities in shape, rim profile, paste, temper, firing, and texture, but differ in surface treatment or decoration.

As a result four additional series are described and given binomial names, conforming to general practice. The first name is that geographic area, in each instance a county name, where the pottery is most popular or frequent, and is the series name. The second name describes the surface treatment.

A pottery series, if correctly identified, will have cultural meaning by its geographical spread and time depth. After the potsherds had been sorted and tabulated, and the frequency of occurrence by series and type at each site was known, three analytical procedures were carried out more or less simultaneously. The first was to find the geographical region over which a particular pottery series was spread. This was done by plotting on individual maps all sites that had so much as a single sherd of the separate series. It was found that while several of the series were restricted in their distribution, others were present over the entire survey area. The fact there was restricted as well as geographically overlapping distributions of these pottery series provided opportunity for dividing southwest Virginia into ceramic areas, and for the use of a quantitative method to determine temporal relationships. The ceramic areas have been defined by the special, specific regions where two or more pottery series show their greatest interaction. It is in these areas that the process of cultural change through time may be shown by a quantitative method, and in this report, seriation of the pottery is used in the various ceramic areas. Since the theoretical basis of this method has been discussed many times there is no reason to repeat them here. The reader is directed to the works of Phillips, Ford, and Griffin (1951, pp. 219–236) and Evans (1955, pp. 76–80).

As a final step in the ceramic study it seemed important to indicate the directions from which cultural influences brought the separate series into southwest Virginia. This was done by reference to the total findings of this study and to the literature pertaining to the surrounding territory. To show these directions graphically arrows have been added to the series distribution maps when the direction of such influences could be determined.

Each series will be given alphabetically, then within each series the various pottery types are described, also in alphabetical order.

On all figures of the sherds interiors are drawn to the left.

## POTTERY SERIES AND TYPE DESCRIPTIONS

## Dan River Series

This sand-tempered pottery composed of various pottery types, was recovered during the 1964 season's survey. As a series, the pottery is incompletely fired, having colors ranging from tan to black and has distinctive rim and vessel shapes. The sample was first divided into two groups: a coarse sand and a fine sand temper, respectively. Each was then examined for surface treatments and firing characteristics. After all sherds had been analyzed, the material was studied from a geographical and temporal standpoint, i.e., the sherds from the Piedmont were compared with those on the western side of the Blue Ridge Mountains. It was found that trends through time were most irregular within types based on these two separate tempers, probably due to difficulties in distinguishing between the two types. Furthermore, other characteristics were very similar, such as firing, color, vessel shapes, wall thickness, and decoration, although there were some local variations. The two divisions of sand temper were abandoned.

After the material had been studied for its own characteristics it was then compared with descriptions of other sand-tempered wares found to the east and south of the survey area, as well as to those varieties found in the area. Evans' Clarksville Series (1955, pp. 49-54) could be ruled out because of the preponderance of folded rims and unique vessel shapes. Coe's Badin Series (1964, pp. 27-29) is different from the standpoint of firing characteristics, lack of decoration, thinned lips, and lack of interior scoring. Coe's Clements Series (op. cit., pp. 102-105) had a coarser temper than the coarse sand in this group, smoothed interiors and the fabric-marked type was done with a wicker type fabric. Evans' Stony Creek Series (1955, pp. 69-75) and Coe's Vincent Series (1964, pp. 101-102) do not describe our sand-tempered materials.

The pottery series to which the Southwest Virginia material belongs is Coe's Dan River Series (Coe and Lewis, 1952). Not only do the geographical and temporal relationships overlap, but the pottery descriptions fall together with reasonable similarity. To conform to standardized pottery type descriptions, and to make them readily available to the archeologist, the various types in this series restricted to Virginia are described in detail, with modification according to special features limited to Southwest Virginia.

## Dan River Corncob Impressed

PASTE: Same as Dan River Net Impressed (below); see that type description for details.

SURFACE TREATMENT AND RIM: Only two sherds of the entire Dan River Series sample bore the impressions of corncobs (Plate 10i). One is a rim that has low wavy undulations with nicks in both the troughs and crests of the waves on the lip. This sherd is from a straight-walled pot. The other is a rim with the lip broken off. The rim is gently everted and the neck slightly constricted.

## Dan River Cordmarked

PASTE: See Dan River Net Impressed (below).

SURFACES:

*Treatment:* Exteriors—Marked with parallel rows of cords closely stacked together. The cords have an S-twist and are between 1 and 3 mm wide. There is no criss-crossing of the application which must have been done when the clay was quite plastic since the impressions are 1 to 3 mm deep (Plate 10f-h).

Interiors—three sherds scraped with a comb-like tool; the remainder are completely smooth.

FORM:

*Rim and lip* (Figure 3): One of three lips is flattened and radially incised; one lip is flattened and incised on the exterior edge (Plate 10h); the third is undecorated. One rim is everted and thickened, but the lip is not present. This sherd is decorated with fingernail punctures 0.75 to 1.0 cm apart.

*Bases:* None identified in sherd sample.

*Shape:* Mouth diameters are 36 to 38 cm while body diameters vary between 28 and 44 cm.

DECORATION: Besides the lip and rim decoration, one body sherd has the right angle of a rectangular or square incised pattern with two incised lines paralleling one of the outside lines. One sherd has gashes on top of the cord marks (Plate 10f).

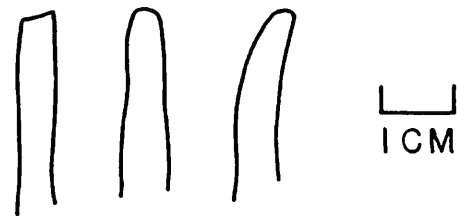


FIGURE 3.—Rim profiles of Dan River Cordmarked sherds. Interiors to left.

## Dan River Net Impressed

PASTE:

*Method of manufacture:* Coiling is discernible on many sherds by beveled, flat and tongue-and-groove coil edge surfaces, sometimes with slightly elevated or depressed

edges where clay has been spread across adjacent coils when flattened. This technique contrasts with the irregular, jagged breaks across sherds made by modeling.

*Temper:* Fine to medium coarse sand with an infrequent fragment of crushed milky quartz, or a rounded river gravel, as large as 5 mm in diameter. On eroded surfaces a sandy feel is apparent, but the grains do not rub off easily. On the majority of sherds the clay has been so well selected, kneaded and compacted that the surfaces do not have a sandy feel, but are slick, even on roughly marked exteriors, and do not cause drag on the sliding finger. The majority of the sherds suggest the sand is a natural ingredient of the clay. Mica and pyrites are present as tiny flakes but are inconsistent in their appearance, and certainly were not a conscious addition to the clay.

*Color:* A wide variety of colors are in the surfaces and

cross-section of each sherd. They range from very light tan to tan, to completely black. Others are buff to orange-red. Approximate percentages are: light tan—15%; completely black—15%; black interiors with orange-red, buff or tan exteriors—50%; black exteriors with buff or tan interiors—10%; buff or tan exteriors and interiors with a grey or black core to 5 mm thick—10%.

*Firing:* Incompletely to completely oxidized.

*Hardness:* 2.5–3.5.

*SURFACES:*

*Color:* Same range as paste.

*Treatment:* Exteriors (Plate 10 *a-e*)—Impressed with a knotted net. The mesh is generally square and varies from 4 to 13 mm between knots. Some nets have a rectangular mesh 4 by 8 mm to a side from knot to knot. The cords are fine, 1 to 2 mm thick, and those from the Piedmont Uplands have an S-twist, but cords on sherds from Grayson and Floyd counties have a Z-twist. Nets were repeatedly impressed against the surface providing each sherd with overlapping cord and knot patterns. On some eroded sherds, or ones to which the application was made when the clay was leather-hard, the imprints are faint having incomplete spidery strands leading away from the knots. It further appears that nets were bundled and impressed, leaving a jumbled maze of cord lines without regular arrangement and all but obliterating the knot imprints. About 30 sherds were impressed with a looped net of parallel cords with cross-connecting cords between the columns.

Interiors—Two-thirds of the sherds are smooth with no interior marks at all. The other third has either been scraped parallel to the rim with a comb-like tool without any standardized spacing of the teeth, or scratched at random in all directions with a similar implement.

*FORM:*

*Rim and lip* (Figure 4): Lips are equally divided between round with a tapering rim, and flat. Most are shallowly nicked, either radially or obliquely, if the rim is straight. If the rim is everted, the nicks are placed on the exterior edge of the lip (Plate 10*a*). Rims vary from completely straight to slightly everted. Two rims have an externally folded rim strip (Plate 10*d*). Another has a 1.5 cm wide added strip, 1 cm below the lip (Plate 10*c*), and one has a 3 cm rim strip added from the lip.

*Body wall thickness:* Varies between 4 and 10 mm with the majority falling in a range between 6 and 8 mm.

*Bases:* Rounded or semiconoidal. The bottom may be flattened over a small area.

*Shape:* Pots with straight-walled rims have mouth diameters from 16 to 42 cm. Pots with everted rims have mouth diameters between 12 and 40 cm. Body diameters range between 20 and 50 cm. The vessels are open-mouthed bowls with rounded or semiconoidal bottoms. These have either straight, or slightly everted rims.

*DECORATION:* Finger pinching or short, shallow stabs were impressed as a single or double row around the neck (Plate 10*b*). These are 0.5 to 1.0 cm apart. An occasional sherd has been finger pinched, and within the scar an additional small stab has been made. Two

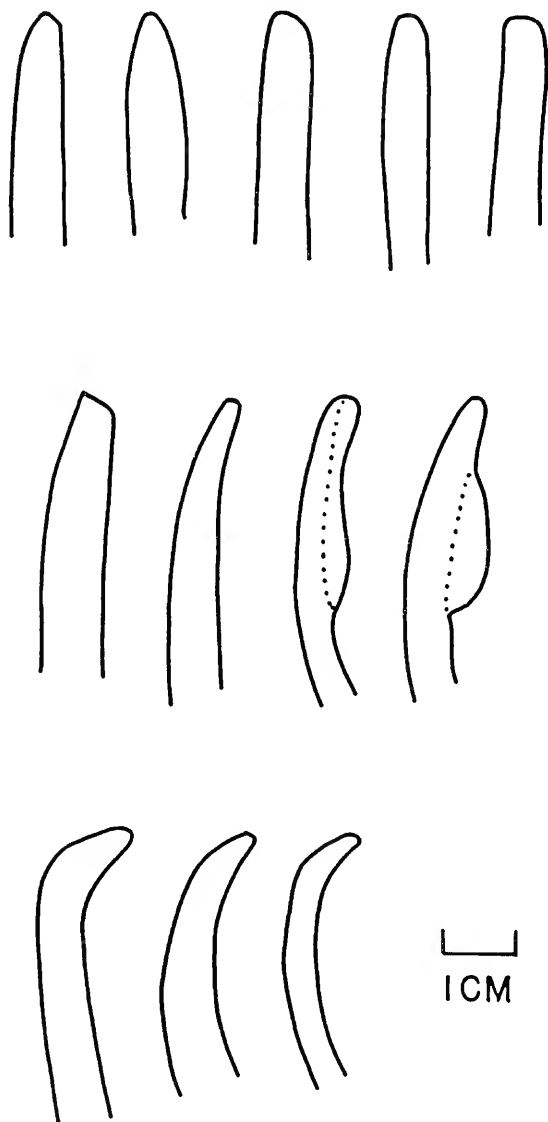


FIGURE 4.—Rim profiles of Dan River Net Impressed sherds. Interiors to left.

sherds were scored with parallel, straight lines, and one rim has been diagonally crosshatched. One sherd has a red film on the interior.

#### Dan River Plain

PASTE: Same as Dan River Net Impressed (p. 49).

SURFACES:

Color: Same as Dan River Net Impressed.

Treatment: Exteriors (Plate 10j-l)—Smoothed to an even surface finish but not burnished. Some sherds show the impression of previous treatment but these have been so smoothed over that it is impossible to determine what the prior treatment was. Since no tool marks are associated with the process of obliteration it probably was done either by hand or a flat stone.

Interiors—one sherd in three has been scraped. A comb-like tool was used on one-half of the marked interiors, and the other half have haphazard indentations from a single toothed flat tool less than 1 cm wide.

FORM:

Rim and lip (Figure 5): Lips are rounded, beveled or flattened, and are either plain or decorated in several ways. There are radially placed nicks; the exterior edge of the lip has been finger pinched, or a comparable impression made with the rounded stem of a stick (Plate 10k). These are 0.5 to 1.0 cm apart. On one sherd the lip has been flattened with resulting external protrusion of the clay, and this flattened lip bears the marks of a net impression. On one flattened and externally beveled lip a series of crosshatching, like tic-tac-toe marks, are present. Another flattened lip has a series of semi-lunar punctures 1.0 cm apart, apparently made with a broken piece of reed or cane. Rims are straight or gently everted.

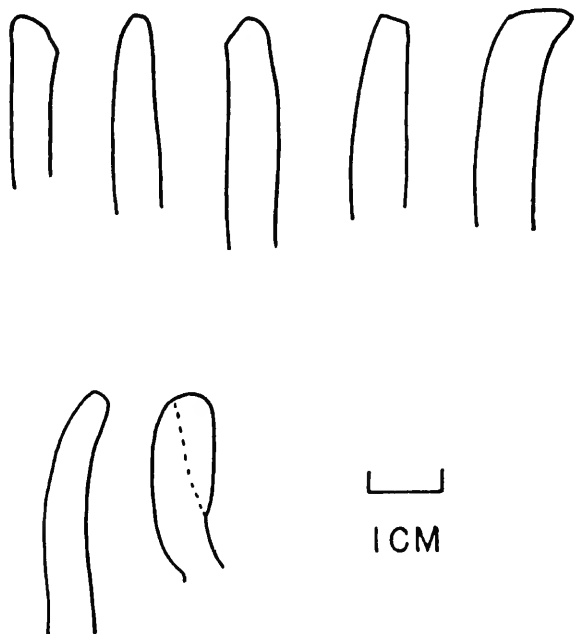


FIGURE 5.—Rim profiles of Dan River Plain sherds. Interiors to left.

Rarely is there a flattened, externally folded rim strip. One straight rim has punctates 1.0 cm below the lip with two rows of vertical gashes, 1.0 cm long.

Body wall thickness: Varies between 5 and 9 mm with the majority from 6 to 8 mm.

Bases: Semiconoidal shape.

Shape: Open-mouth vessels with straight sides or slightly everted rims. Mouth diameters vary between 22 and 34 cm. Body diameters vary between 18 and 36 cm.

DECORATION: Normally plain but occasional decorations include parallel lines (Plate 10l) and a V-shaped incision with small punctates filling the V (Plate 10j).

#### Dan River Stamped

PASTE: See Dan River Net Impressed (p. 49).

SURFACE TREATMENT: One sherd has been stamped with an incised paddle. The pattern appears to be nested triangles rather than curvilinear (Plate 10n). Two sherds have been marked with a root- or thong-wrapped paddle, yielding a simple stamped design. Two sherds have been paddled with a stamped design but have been so badly broken that the exact nature of the motif cannot be determined (Plate 10m).

#### GEOGRAPHICAL DISTRIBUTION OF THE DAN RIVER SERIES

This series is highly concentrated in the Piedmont Uplands east of the Blue Ridge Mountains, on Dan River and its tributaries, the Mayo and Smith Rivers. It is also found on the western side of the Blue Ridge, mainly on New River around the mouth of Little River where both flow out of North Carolina into Virginia (Fig. 6). Coe and Lewis (1952) place the geographical range in the central Piedmont along the Virginia and North Carolina boundary.

#### CHRONOLOGICAL POSITION OF THE DAN RIVER SERIES

Coe and Lewis (1952) state that this ceramic complex is related to the Sara Indians in a time range between 1625 and 1675.

#### Grayson Series

One of the major wares from southwest Virginia is a crushed stone, nonlimestone-tempered series, usually crushed quartz, with a sandy paste, fired grey to black on the interior surface and orange, buff or grey exterior surface and sherd cross-section, and generally globular, open-mouthed pots with straight walls. There are three described series in Eastern archeological literature to which the series may be related. Coe (1964, pp. 30-32) has described a Yadkin Series consisting of Yadkin Cordmarked, Yadkin Fabric-Marked

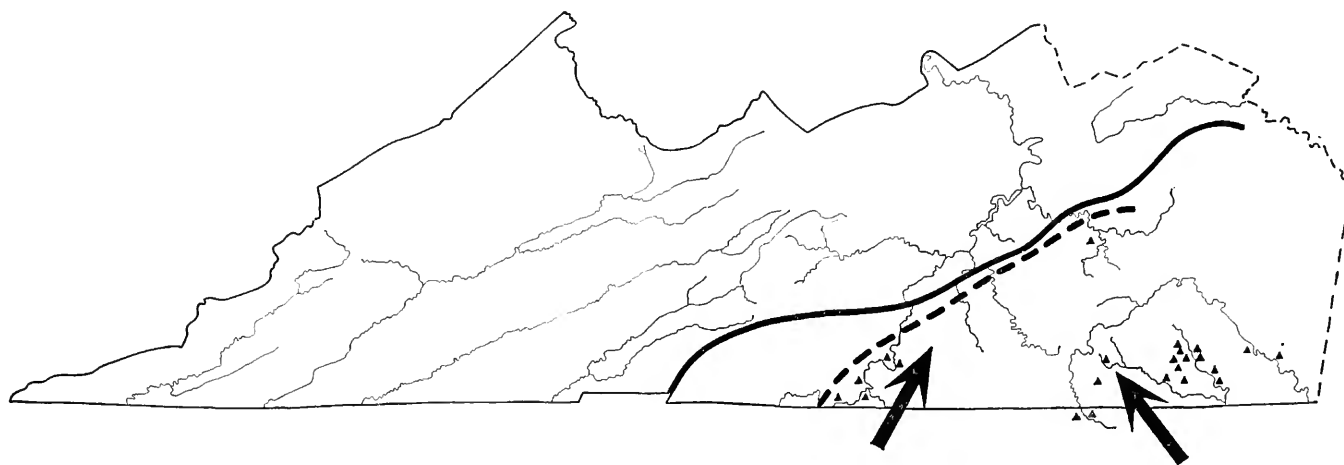


FIGURE 6.—Geographic distribution of the Dan River Series. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east. Heavy dashed line indicates the western limit of the pottery. Triangles indicate sites where Dan River pottery occurs. Arrows show probable direction of movement into the area.

and Yadkin Linear Checked Stamped. The temper, method of manufacture, and firing characteristics are similar to this series. The Yadkin drainage, lying just south of the eastern sector of the survey area brings the two series in close geographic approximation. Furthermore the appearance of a checked stamped type at Gy-10 suggests affiliations to the south; however, there are differences. The fabric-marked Grayson type is not of the "wicker" variety described by Coe. The checked stamped Grayson type is not linearly arranged as Yadkin Linear Checked Stamped, although the arrangement of the stamping may be of minor importance. This leaves only Yadkin Cordmarked to be equated with Grayson Cordmarked. The Grayson Series has a high proportion of a net-impressed type, and is associated with a plain and scraped type also. This would mean that the material at Coe's Doerschuk Site represents a limited sample, and other types are to be found elsewhere in the Yadkin drainage, or there is a unique situation at Doerschuk (see Coe, 1952 p. 307).

Coe (1952, p. 308) as part of his Uwharrie Focus briefly describes a series of pottery types, which is nearly the same as the Grayson Series. Both are tempered with crushed stone, almost entirely quartz in Coe's Uwharrie description and usually quartz in the Grayson Series; both are predominantly net impressed; cordmarking is present but not as popular a type. Both have interior scoring, although Coe's material was invariably scored, while at most only half the Grayson sherd sample has this interior treatment. In the Grayson Series fabric-impressed, plain, and scraped sherds are also set up as types within the series, only one of which, an exteriorly scraped type, is mentioned by Coe. Furthermore Uwharrie pottery

preceded Dan River, a factor which is true for this area also (Coe, 1952, pp. 309-310).

Another series to which Grayson may be related is Evans' Albemarle Series (1955, pp. 39-44). Here the paste, temper, firing characteristics, and most exterior treatments are similar; however, there are differences. The fabric-marked type is similar to the "wicker" type of the Yadkin Series. Evans' seriation for the Central and North Central Ceramic Area (*ibid*, fig. 18, p. 101) shows that this type becomes more popular through time, a reverse of the condition in the survey area. Albemarle Net Impressed is of minor importance, and occurs sporadically through time. Grayson Net and Knot Roughened is the most popular type within the series with an occurrence between 13.8 and 37 percent at the bottom of the seriation (Figure 7). Albemarle Series is closely associated with Stony Creek Series, a sand-tempered series, which diminishes through time as Albemarle increases. This relationship of tempering, i.e., increasing crushed stone and diminishing sand as temper is reversed in the survey area as a glance at the graph (Figure 8) will show. Geographically Albemarle and Stony Creek Series spill over into the Valley Province from the Piedmont north of the survey area (Holland, 1960, fig. 11, p. 83). Whether or not these series spread southwestwards as far as the region of present concern is unknown, due to the lack of archeological information.

There are two other crushed stone, other than limestone, pottery wares which may be mentioned. Coe's Gaston Series (1964, p. 105), of which only one type is described, Gaston Simple Stamped, is not represented in the survey area. The treatment of rims and type of stamping described by Coe for this type are not found in the survey area. In addition Gaston

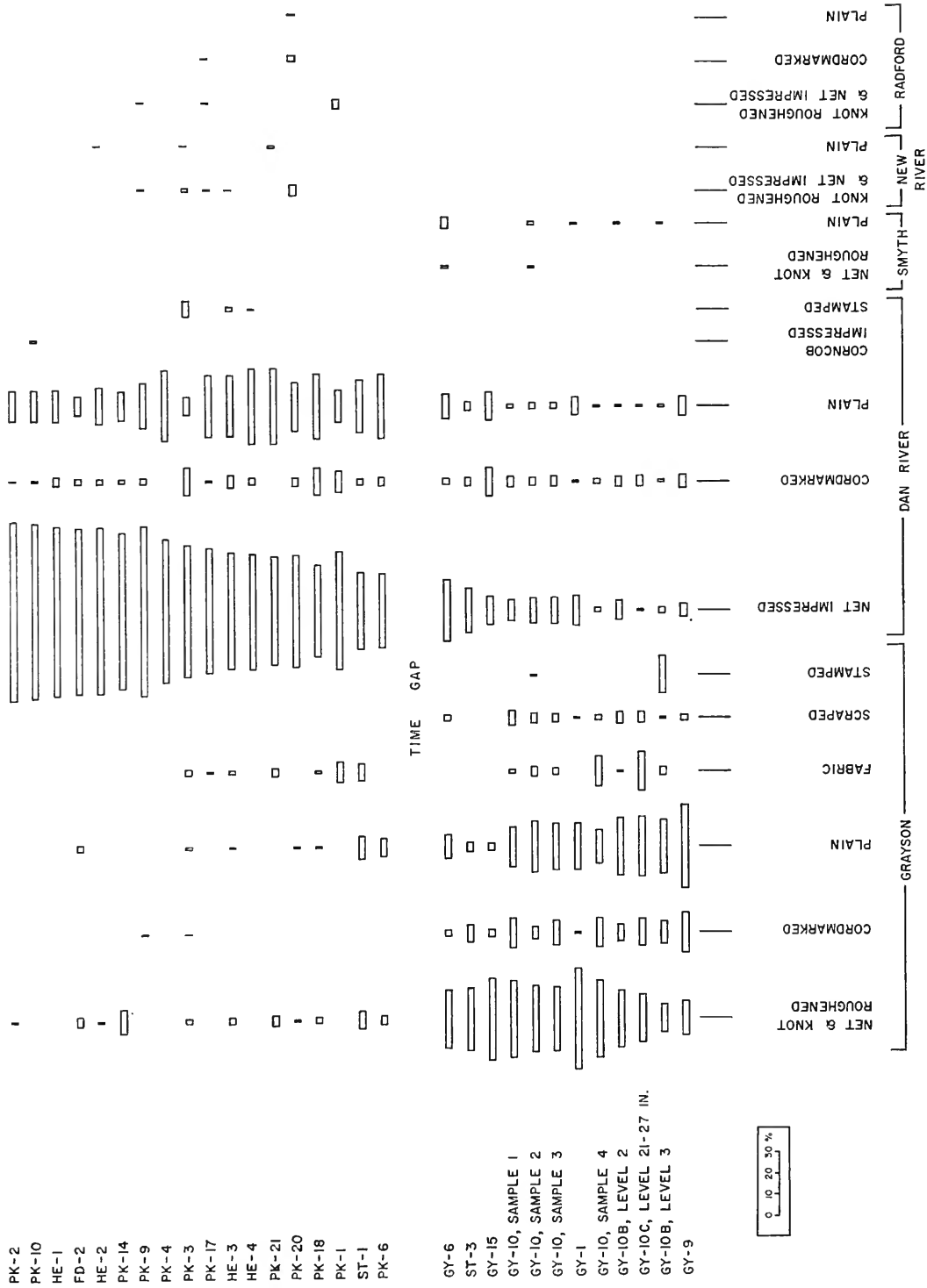


FIGURE 7.—Seriation of pottery types in the Piedmont Uplands-Blue Ridge Mountains Ceramic Area. GY-10B and GY-10C refer to Squares B and C. See Appendix table 1.

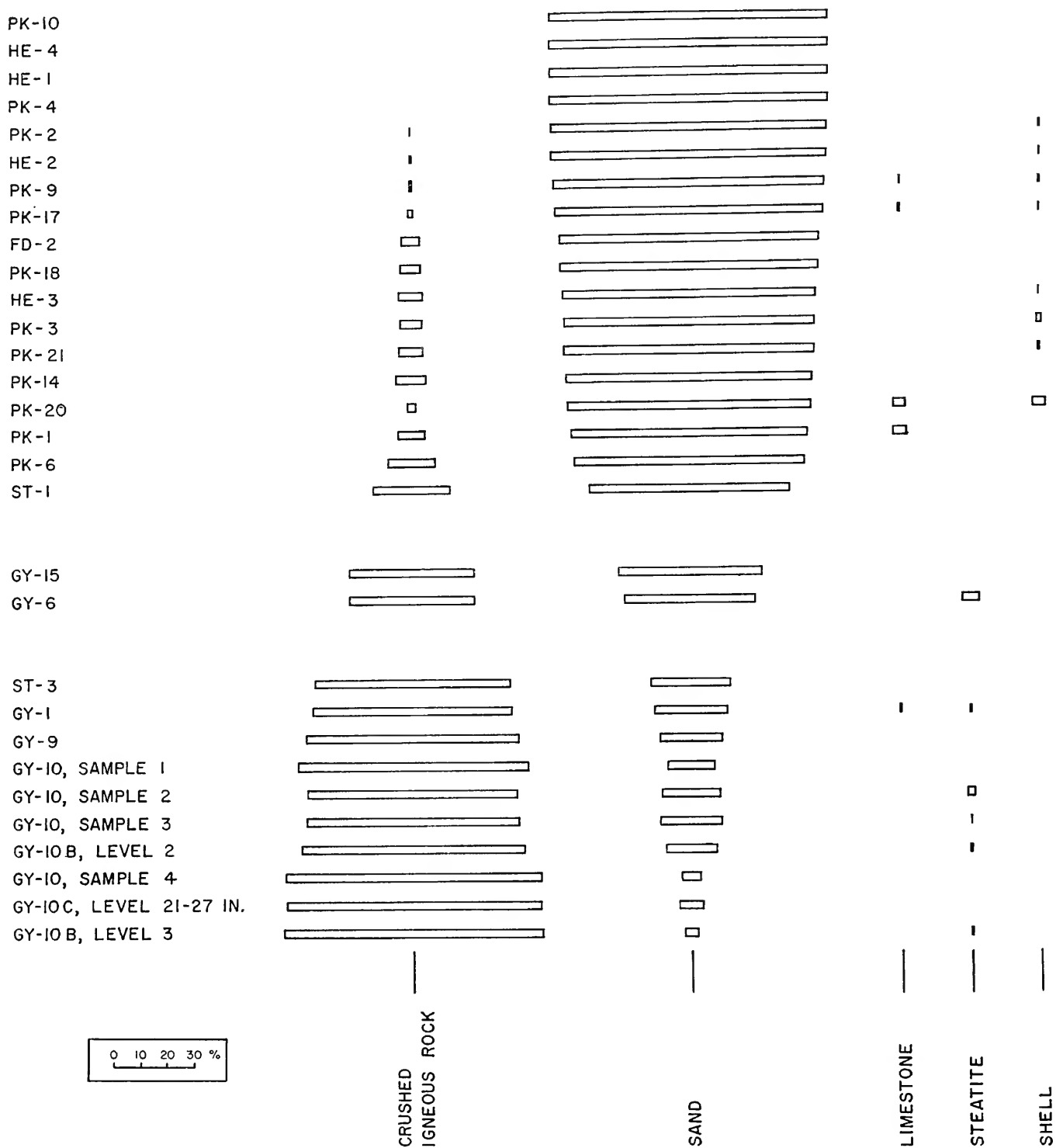


FIGURE 8.—Temper seriation in the Piedmont Uplands-Blue Ridge Mountains Ceramic Area. Gy-10B and Gy-10C refer to Squares B and C. See Appendix table 1.



Simple Stamped appears late in the temporal sequence (ibid, fig. 94), replacing Vincent and Clements for the most part, a factor at variance with the findings here. The other types are Watts Bar Fabric Marked and Watts Bar Cordmarked (Lewis and Kneberg, 1957) which have both quartzite and sand temper. The descriptions of these types are not sufficiently complete so that a detailed comparison cannot be made; however, the flat bases of Watts Bar Cordmarked are not found, the tempering materials differ, and the fabric markings also appear to be divergent.

In summary, the Grayson Series is descriptively, geographically, and temporally identifiable with Coe's Uwharrie pottery but with regional differences. It shares numerous similarities with Albemarle Series and the four series, Albemarle, Grayson, Uwharrie, and Yadkin appear to be extensions of a single ceramic tradition with local, temporal, and type variations.

#### Grayson Checked Stamped

##### PASTE:

*Method of manufacture:* Coiling.

*Temper:* Crushed quartz and quartzite, quartz predominating.

*Texture:* Very friable, the paste breaking readily into crumbs.

*Color:* Orange-red to orange-grey interior and exterior with a grey core 3 to 5 mm thick.

*Firing:* Incompletely oxidized.

*Hardness:* 2.5-3.5.

##### SURFACE:

*Color:* Same as paste.

*Treatment:* Exteriors—These have been paddled smooth, leaving only traces of a checked stamp paddle. The repeated application, and overlapping pattern of application has been such that no single contour of a stamp is accurately measurable (Plate 11*k*).

Interior—Entirely without markings.

##### FORM:

*Rim and lip:* None in sample.

*Body wall thickness:* Same as Grayson Net and Knot Roughened.

*Base:* Rounded.

*Shape:* Globular pot, with a body diameter of 24 cm.

#### Grayson Cordmarked

PASTE: See Grayson Net and Knot Roughened (p. 56).

##### SURFACES:

*Color:* See Grayson Net and Knot Roughened.

*Treatment:* Exteriors—Repeatedly beaten with a cord-wrapped paddle in an overlapping fashion up to edge of lips. The overlapping occurs at numerous angles, from right angles to almost parallel. Single application is rare (Plate 11*g*). Cords have a Z-twist, two-strand make-up, and are between 1 and 3 mm wide, impressed 0.5 to 2 mm into the clay. A few cords are composed

of four strands, that is, two cords of two strands, also with a Z-twist.

Interiors—One half are completely smooth, and the other half are either scraped by a toothed tool or scratched with a blunt-ended implement.

##### FORM:

*Rim and lip* (Figure 9): Rounded and flat lips. Rim-tapered or vertical sidewalls.

*Body wall thickness:* Ranges 7 to 10 mm; majority 8 mm.

*Bases:* Probably rounded. The thicker walls probably represent basal sherds, but these do not change contour.

*Shape:* One measurable rim is 30 cm in diameter. Body wall diameters range between 18 and 38 cm with most falling into the group of 32 to 36 cm in diameter. An open-mouth, globular pot with rounded bottoms and unrestricted necks.

OCCASIONAL DECORATION: Finger pinching in rows around the neck.

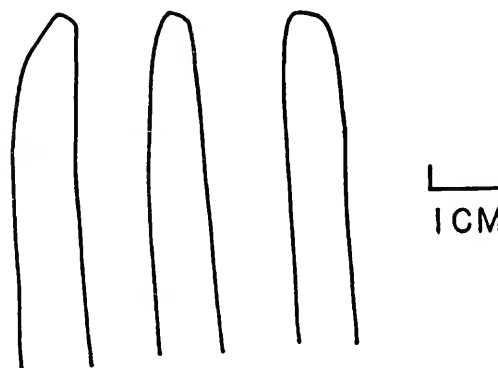


FIGURE 9.—Rim profiles of Grayson Cordmarked sherds. Interiors to left.

#### Grayson Fabric Impressed

PASTE: See Grayson Net and Knot Roughened (p. 56).

##### SURFACE:

*Color:* See Net and Knot Roughened.

*Treatment:* Exteriors—Malleated with a fabric having an under-and-over weave of alternate strands of warp across the woof. The warp is 4 to 6 mm apart while the woof is 2 to 4 mm apart. The cords are double strands with a Z-twist, and are not split in crossing the warp. They are 1 to 4 mm wide, the wider strands being used with the wider spaced woof and warp (Plate 11*c,d*).

Interiors—Completely smoothed and scraped. When a toothed tool was used, this was later partially eradicated by hand swiping.

##### FORM:

*Rim and lip* (Figure 10): Beveled and rounded lips, straight and everted rims.

*Body wall thickness:* Varies between 5 and 12 mm, with most sherds 7 mm thick.

*Base:* Undetermined, probably rounded.

*Shape:* Subconoidal pots.

OCCASIONAL DECORATION: Incised line 1 cm below rim.

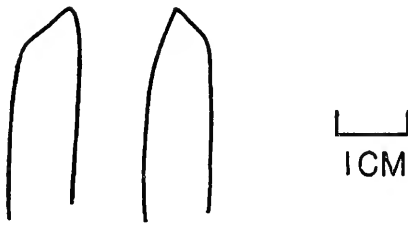


FIGURE 10.—Rim profiles of Grayson Fabric Impressed sherds. Interiors to left.

#### Grayson Net and Knot Roughened

##### PASTE:

*Method of manufacture:* Coiling. Fracture planes between coils are either smooth and flat, or beveled. Wedges of paste have been worked across the flattened juxtaposed coils to smooth the surfaces and fill the intervals between them. At Site Gy-10 only a few fractures followed coil lines, most were fractured in planes across coils, indicating good working of the coils into a strong, solid wall.

*Temper:* From Henry and Patrick Counties crushed milky quartz in about 10 percent of the paste was the only temper observed. At Site Gy-10 there was quartz, quartzite, and granite-gneiss in order of popularity, and this additive was 10 to 50 percent of the sandy paste. The temper at times was so thick-set in the paste that only thin interstices of clay held the pot together. Most fragments were 2 to 5 mm in diameter but single examples were as large as 9 mm, none of which ever penetrated the entire wall of the pots. Temper particles are not only visible on broken and eroded surfaces but speckle the interior surfaces, rarely the exterior (Plate 11f). Tiny flecks of mica and pyrites are present but are not a conspicuous feature.

*Firing:* The greatest heat appears to have been applied to the exteriors, oxidizing this and leaving the interiors either more or less reduced or carboniferous. It may be inferred that the firing was not too well controlled, and that the pots were placed mouth-down on the ground, or firing platform, and the fire built around them. The black, carboniferous exterior of some sherds, seen as a thin coating, probably was due to cooking fires rather than kiln fires.

*Hardness:* 2.5 to 3.0.

##### SURFACES:

*Treatment:* Exteriors—Repeated application of a net has obliterated on many sherds any single mesh imprint (Plate 11b). The result is a heavily pitted exterior, mainly from knots, with pits being 1 to 2 mm deep. Measurable meshes are square, from 4 to 6 mm on a side from knot center to knot center. The double strand cords have a Z-twist and are 1 mm or less in width. Eroded sherds show the imprints of knots by their regular arrangement, while the cords between knots may have been completely effaced, or extend only a short distance from one knot toward the next.

A few sherds at Site Gy-10 were impressed with a fabric with net characteristics and were placed in this category. The net resulted from splitting the two

strands and weaving one above, and the other below, the warp. The interval between warp is 5 mm, and 3 to 4 mm between woof.

The paste has a sandy feel but the grains do not rub off. This fine-grained sand appears to have been a native ingredient of the clay, and not an added constituent.

*Interiors*—Only four sherds from Henry and Patrick Counties had been combed or scraped while half the sample from Gy-10 had been thus treated. The tool was serrated, and the rows of grooves and ridges were partially obliterated by hand swiping. Occasionally a flat-ended tool, such as a squared-off stick, was used in a haphazard fashion to scrape the interior. The remainder of the sample is completely smooth on the interior, but there is no evidence of dragging temper fragments, and no effort has been made to hide the temper.

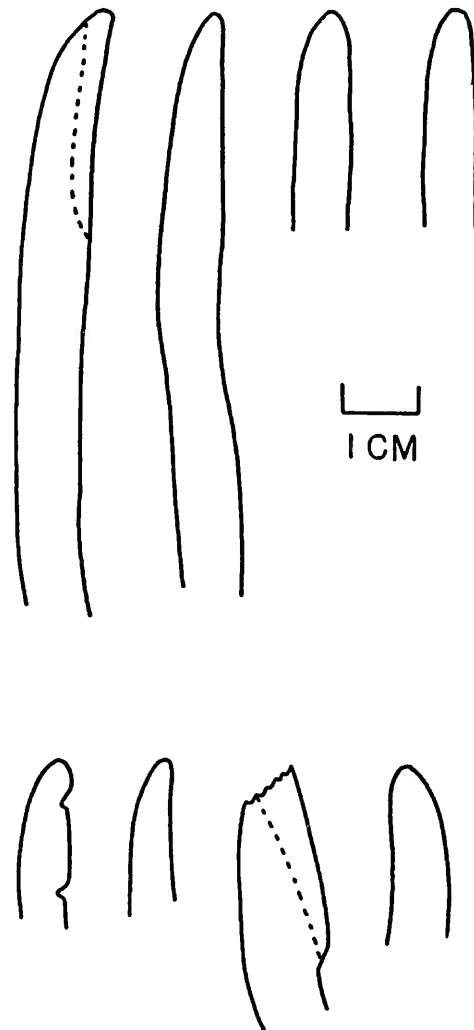


FIGURE 11.—Rim profiles of Grayson Net and Knot Roughened sherds. Interiors to left.

**Color:** From Henry and Patrick Counties the majority of the sherds have a black to grey inner lamina from 1 to 4 mm thick with a sharp line of demarcation from an outer zone of orange, grey, or buff. Rarely is a sherd completely black or grey throughout. Less rarely is a sherd completely buff or orange-red through the wall. Fire clouds occur, but are not a conspicuous feature, and a few sherds have a carbon coating on the exterior which does not penetrate the paste to any visible depth at the edges of fractures.

At Site Gy-10, a third of the sample is uniformly black in cross-section. Another third is black on the interior, and this color extends almost to the exterior, but leaves a 1- to 3-mm shell on the exterior which is either tan or buff. The remaining third has either a black core with both interior and exterior surfaces tan or buff, or has been fired so that no residual black remains.

**FORM:**

**Rim and lip (Figure 11):** Lips are rounded and unmarked.

Net impressions go to the outer edge of the lip, even if the rim is decorated. One sherd has an externally folded rim strip which is so flattened it does not increase the thickness of the rim wall. It is 3 cm wide. Another, with a broken lip, is folded exteriorly, and also diagonally incised with 2 parallel lines from right to left (above downwards), forming a 60-degree angle with the lip.

**Body wall thickness:** The thinnest wall is 5 mm, the thickest 11 mm. The average wall thickness is 7 to 9 mm.

**Base:** Bases merge with the body walls without change in contour. It is presumed that the thicker sherds relate to bases. No prepared basal platforms were encountered.

**Shape:** Open-mouth pots with straight sides and rounded bases. Mouth diameters vary between 24 and 36 cm.

**Body diameter:** These match the mouth diameters almost exactly, being 24 to 38 centimeters.

**DECORATION:** Minor decoration is confined to the rim as described above. Decoration of the rim occurs immediately below the lip and consists of punctures or parallel incised lines. The body sherds were not decorated, although one sherd had two parallel incised lines which may have been extensions from the rim.

**Grayson Plain**

**PASTE:** See Grayson Net and Knot Roughened (p. 56).

**SURFACES:**

**Color:** See Grayson Net and Knot Roughened.

**Treatment:** Exteriors (Plate 11 f, h-j)—Smoothed but not burnished. The results of prior treatment can be seen, but this has been so smoothed that it cannot be positively identified (Plate 11 i, j).

**Interiors**—One-half the sample has been scraped with a multiple toothed tool. The other half is smooth and regular.

**FORM:**

**Rim and lip (Figure 12):** Usually rounded, or flattened. Rims direct or slightly tapered and everted or vertical sidewalls; some thickened exteriorly at lip edge or folded over to form a collared strip 2.5 cm wide (Plate 11 j).

**Body wall thickness:** Range 4 to 10 mm, majority 7 to 8 mm.

**Bases:** Thickened to 12 to 14 mm and are subconoidal.

**Shape:** Mouth diameters range from 16 to 34 cm. Open-mouthed pots with subconoidal bases.

**OCCASIONAL DECORATION:** Limited to rim and lips, as incisions, parallel lines or gashes.

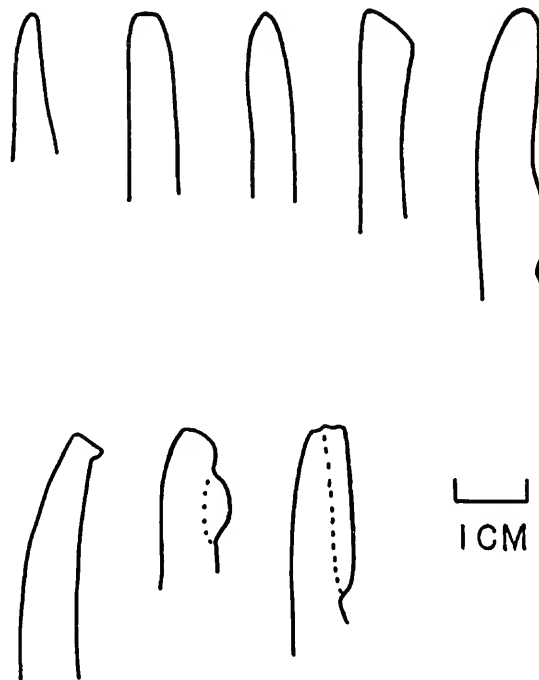


FIGURE 12.—Rim profiles of Grayson Plain sherds. Interiors to left.

**Grayson Scraped**

**PASTE:**

**Method of manufacture:** See Grayson Net and Knot Roughened (p. 56).

**SURFACE:**

**Color:** See Grayson Net and Knot Roughened (p. 56).

**Treatment:** Exteriors—Haphazardly scratched and scraped with a flat-ended tool, 4 to 12 mm wide. This was done over a prior treatment, either net and knot roughened or fabric impressed that, in addition, had been smoothed by hand swiping. On a minority of sherds a toothed tool may have been used and subsequently these marks were almost entirely obliterated by hand swiping, making it impossible to determine the type of tool.

**Interiors**—The sherds are about equally divided between completely smoothed and scraped. The scraping has been done with an unstandardized tool and without particular direction of scraping.

**FORM:**

**Rim and lip:** No specimens.

**Body wall thickness:** Ranges 5 and 9 mm, majority 7 mm. Some irregular in thickness.

**Bases:** Probably rounded; a 10 mm thick sherd is probably a basal sherd.

**Shape:** Unknown.

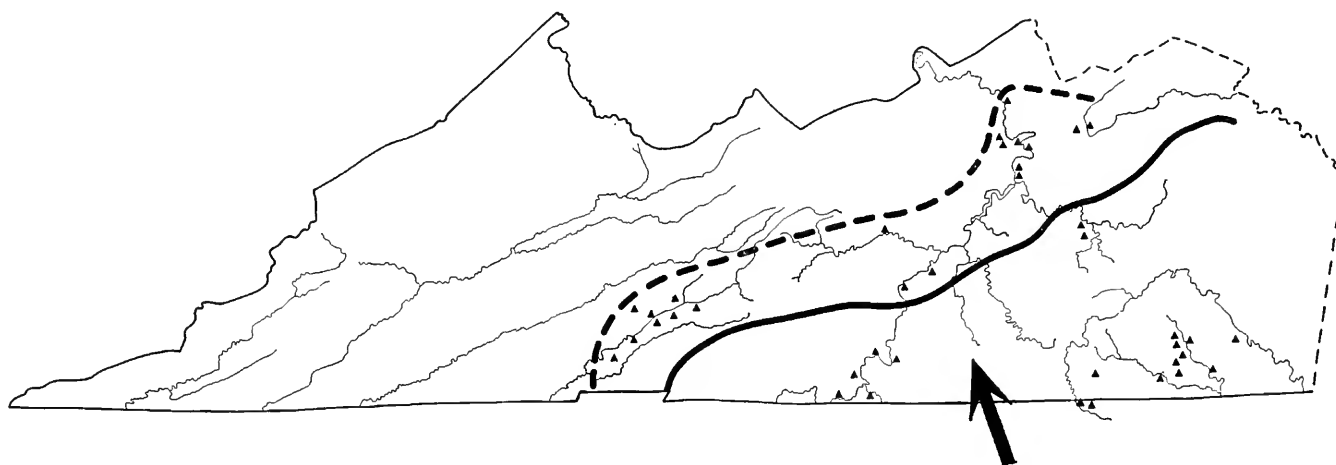


FIGURE 13.—Geographical distribution of Grayson Series pottery. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east. Heavy dashed line is the western limit to which the series was found. Arrow represents the probable direction of movement into the area. Triangles are sites with this series.

#### Grayson Stamped

PASTE: See Grayson Net and Knot Roughened (p. 56).

SURFACES: Exteriors—Small sherds and limited quantity make reconstruction of markings difficult. Both curvilinear and simple stamping are represented.

Interiors—Smooth.

FORM: Insufficient sample to reconstruct.

#### GEOGRAPHICAL DISTRIBUTION OF THE GRAYSON SERIES

This series, when plotted on a map (Figure 13), has an areal distribution similar to, but not identical with, the Dan River Series. Dan River Series is most popular in the Piedmont Uplands while Grayson is most popular on the western side of the Blue Ridge Mountains, around the entrance of Little River as it flows from North Carolina into New River. There are two exceptions to this pattern at Sites St-1 with 27.9 percent and St-3 with 70.9 percent Grayson Series on Dan River in North Carolina. Peripherally from these areas of high popularity the percentage of Grayson Series on individual sites is comparatively low, especially in the Piedmont Uplands where the Dan River Series is highest. The apparent heart area of the Grayson Series is further south in North Carolina where the Uwharrie Focus has been described by Coe (1952, pp. 307–308).

#### CHRONOLOGICAL POSITION OF THE GRAYSON SERIES

Stratigraphically Grayson Series pottery was found in greater frequency at lower levels at Site Gy-10, and when seriated, predates the Dan River Series. This temporal position conforms to the sequence as

proposed by Coe and Lewis (1952), in which Uwharrie precedes Dan River Pottery. No absolute dates have been found for the Grayson Series.

#### Lee Series

This is a sand-tempered ware, fired in an oxido-reducing atmosphere, and with diagnostic rim and vessel shapes. The ceramic type described here as Lee Linear Stamped is apparently well known to Southeastern archeologists. Examples were seen at the Museum of Anthropology, University of North Carolina, through the courtesy of the Director, Dr. Joffre Coe. These sherds came from western North Carolina. At the Chauga Mound and Village Site in Oconee County, South Carolina, Kelly and Neitzel (1961) found an aberrant type for the site which had its strongest representation in the early mound stage. They discussed this type with various Southeasternists who indicated it had a wide distribution in the immediate southeast and was informally called "Pseudo-Iroquois." Two carbon-14 dates at the Chauga site associated with this pottery are A.D. 1070  $\pm$  50 years (M-939) and A.D. 1120  $\pm$  150 years (M-933). This aberrant type at Chauga is very similar if not identical with Lee Linear Stamped. Richard Polhemus (personal communication; Polhemus and Polhemus, 1966) has described a type, Cobb Island Complicated Stamped. He kindly supplied me with a copy of his description and undoubtedly Lee Linear Stamped is represented here. His experience indicated that his pottery is associated with early Mississippian periods and is found on the larger tributaries of the Tennessee River in northeastern Tennessee and extends into southwestern Virginia.

**Lee Checked Stamped**

**PASTE:** See Lee Linear Stamped.

**Color:** See Lee Linear Stamped.

**SURFACES:**

**Treatment:** Exteriors—Fragmentary sherds and the small sample precludes definite analysis although the use of a paddle with small incised squares or rectangles is evident.

Interiors—Smooth.

**FORM:** Too small a sample to describe.

**Lee Linear Stamped**

**PASTE:**

**Method of manufacture:** Coiling and hand-modeled by patching and stretching. Fractured cross-section surfaces are usually irregular, without tongue and groove effect of coiling.

**Temper:** Fine to medium sand, with some particles as large as 1.5 mm. Sherds have a sandy rough feel. The sand is uniformly distributed throughout each sherd.

**Color:** The majority of the sherds are buff on the exterior but grade into a light grey toward the interiors. A few sherds show a spotty reddening toward orange on the exterior. One-half of the minority have the same color throughout the thickness of each sherd and the other half have a millimeter film of blackened core that contrasts abruptly with the orange color of the exterior. All sherds have small, shining flecks of mica which does not appear to be a conscious inclusion but rather an ingredient of the sand or clay.

**Firing:** Highly uniform, suggesting a well-controlled firing system.

**Hardness:** 3.0–3.5.

**SURFACES:**

**Treatment:** Exterior—Malleated with a paddle, presumably wooden, while the clay was quite plastic. The paddle had two sets of parallel grooves and ridges placed at right angles to one another. (Plate 12 *b, c*.) The longer set, two in number, peripherally located on the paddle, are 2 to 3 mm wide and 1 mm deep. There were probably two sets of these longer grooves and ridges, one on either side of the second set, running at right angles between the longer ones. However, this is difficult to determine because of the repetitive application of the paddle. Also, due to the lack of any restorable pot, it is difficult to determine the entire length of these longer grooves and ridges. Measurements on the largest sherds indicate a length of 2.5 to 3 cm at least. Running at right angles to the long grooves and ridges is another set which are 1.0 to 1.5 mm wide and 1 mm deep. These vary in length from 1.0 to 2.8 cm in length. The longest uninterrupted series of these is a count of 11 over a distance of 3.4 cm.

Generally, the repeated application of the paddle, bringing the longer set on a line, or offset slightly at the ends, also brings the shorter group parallel. This neat arrangement is marred by twisting the paddle so that the two groups form arcs. In addition, a few sherds show that the application of the paddle was at right angles, causing crosshatching. No sherds show any haphazard treatment

such as might result from applying the paddle at all angles.

Basal sherds have been stamped also, but here the markings are partially obliterated from wear. The pattern is also applied to the underside of the everted rims. At this point the direction of application is oblique to the circumference of the rim, both to right and left.

Interiors—These are uniformly smooth and regular, with no marks of hand swiping or scraping, apparently produced by use of an anvil. Some sherds are almost burnished, contrasting with the sandy feel of others, and with the exteriors.

**FORM:**

**Rim and lip (Figure 14):** Three types of rims occur. The most common is an added rim strip that thickens the rim to twice the thickness of body sherds and is 18 to 22 mm wide. The lip is flattened and unmarked but the smooth, flat rim has a series of interrupted gashes forming a Z-pattern. (Plate 12 *a, d*.) On the majority of sherds the upper row runs slightly downwards from left to right and the others directed to form a Z, while on the minority, of sherds the gashes form a “reversed” Z-pattern. The gashes are 8 to 12 mm long, but some are short and best described as puncture (Plate 12*e*). A second type of rim is a thickened everted lip that is either flat or concave and may be decorated with punctures, 4 mm apart from center to center. A third group has either a rounded lip with a plain, unmarked rim area 10 mm wide, below

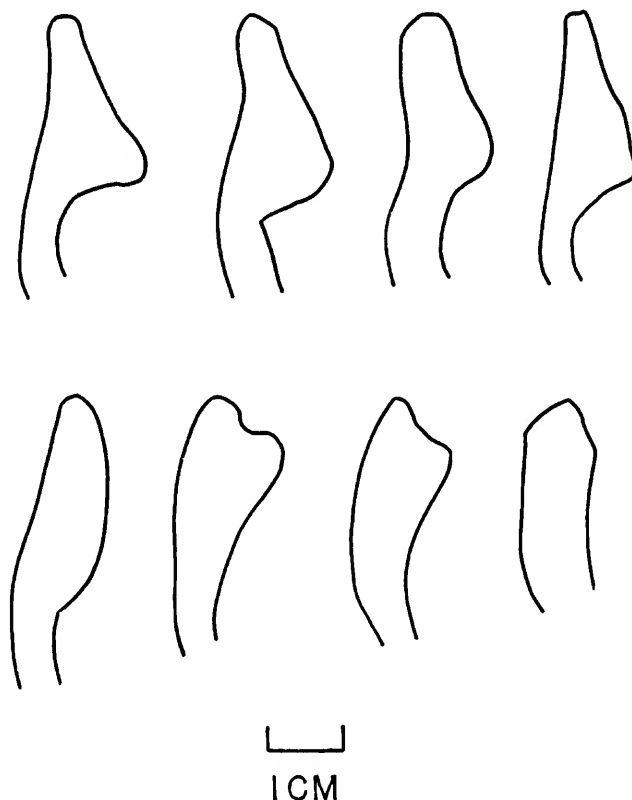


FIGURE 14.—Rim profiles of Lee Linear Stamped sherds. Interiors to left.

which is the linear stamping, or there may be small castellations on the exterior of which are short, parallel grooves.

*Body wall thickness:* Range from 4 to 10 mm with the majority 6 to 7 mm.

*Body diameter:* 36 to 44 cm.

*Base:* Rounded.

*Shape:* Open-mouthed globular pots.

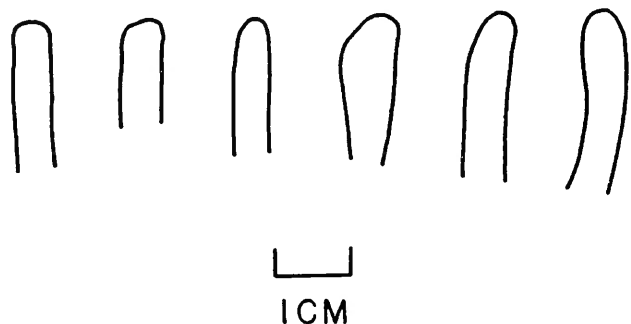


FIGURE 15.—Rim profiles of Lee Plain sherds. Interiors to left.

#### Lee Plain

##### PASTE:

*Method of manufacture:* Apparently coiling.

*Temper:* Fine sand. Small flecks of mica uniformly distributed throughout clay.

*Color:* Generally buff with minor gradations into grey. The color on any one sherd is consistent throughout, that is, on both surfaces and in cross-section. A few sherds have an inner blackened surface which may penetrate to a depth of 1 to 3 mm.

*Firing:* Uniform, but incompletely oxidized.

##### SURFACES:

*Treatment:* Exteriors—Generally smooth (Plate 12f). In some cases, the linear or haphazard marks of previous treatment remain but these have been all but obliterated. Interiors—Uniformly smooth and even.

##### FORM:

*Rim and lips* (Figure 15): Rounded lips on straight sided to slightly everted, thickened or unthickened rims.

*Body wall thickness:* Range 4 to 9 mm, majority 6 to 7 mm.

*Body diameter:* Sherds too small for accurate measurements.

*Bases and shape:* Rims indicate mouth diameters of 22 to 52 cm. No recognizable bases. Vessels shape unknown.

#### Lee Simple Stamped

PASTE: See Lee Linear Stamped (p. 59).

Color: See Lee Linear Stamped.

##### SURFACES:

*Treatment:* Exteriors—Impressed with a smooth thong- or root-wound paddle, (Plate 12g) leaving parallel grooves 3 to 7 mm wide and 1 mm deep. The edges and the angles in the bases of these depressions are rounded and smooth, rather than sharp and clear-cut. Application of the paddle may be overlapping.

Interiors—Smooth.

##### FORM:

*Rim and lip:* One sherd is a rim, and this has only a fragmentary lip. It shows eversion of this area of the pot.

*Body wall thickness:* 6 to 7 mm.

*Base:* Unknown.

*Shape:* Unknown.

#### GEOGRAPHICAL DISTRIBUTION OF THE LEE SERIES

A glance at the map (Figure 16) shows that the Lee Series is isolated in the very tip of southwestern Virginia on Powell and Clinch Rivers. A single sherd found at Sm-10B, on the Middle Fork of the Holston River, is an indication there may be a slightly more northeastern extension, but of a limited nature. From the data given previously (p. 58) it is evident that this series has a widespread distribution over the southeast and that its intrusion into the survey area represents a northern peripheral margin.

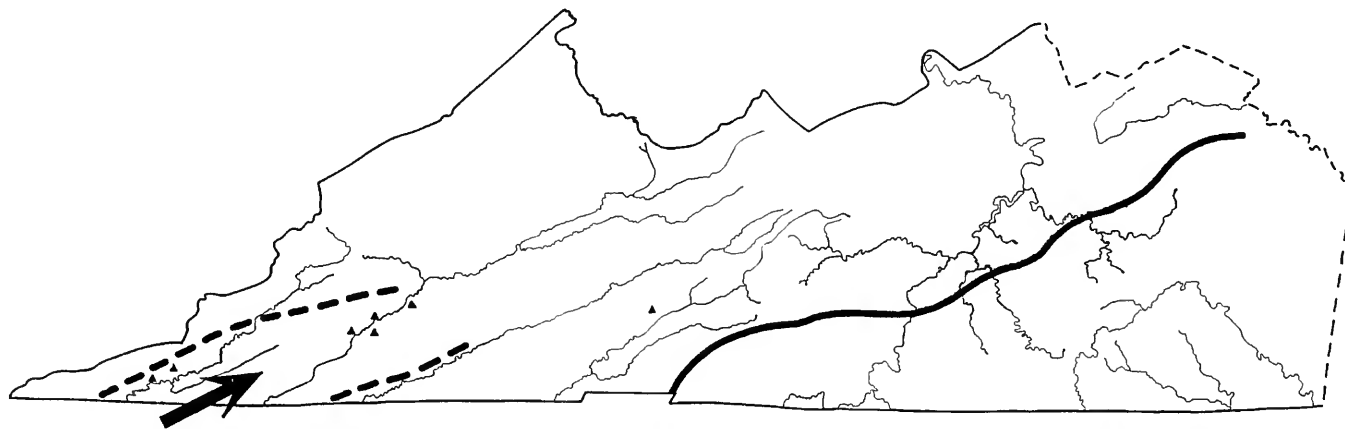


FIGURE 16.—Geographical distribution of Lee Series pottery. Heavy dashed line encloses the area in which it was found and arrow represents the probable direction of movement into the area. Triangles are sites within the series. The heavy solid line is the separation of the geological Valley Province to west from the Blue Ridge Province to east.

## CHRONOLOGICAL POSITION OF THE LEE SERIES

The only carbon-14 date associated with the Lee Series in southwestern Virginia is from Site Le-17B at a depth of 12–18 inches, and is A.D. 1210  $\pm$  120 years (SI-131). This is approximately 100 to 150 years later than the dates at the Chauga Site, 160 miles to the south, the dates of which have been given previously (p. 58). It seems probable that the peripheral location of the Lee Series in the survey area accounts for the later date.

## New River Series

This series has been described by Evans (1955, pp. 56–59) as a group of pottery types characterized by a grey-tan surface, incompletely oxidized, producing a grey-cored paste, with crushed-shell temper and with certain diagnostic rim and vessel shapes.

## New River Cordmarked

**PASTE:** Same as New River Knot Roughened and Net Impressed (below).

**SURFACE:**

**Color:** Exterior—Majority a dull, gray-tan with some ranging toward gray-black or light tan.

Interior—A grayish hue predominates, ranging to gray-tan or grey-black.

**Treatment:** Exterior—Haphazardly beaten with a cord-wrapped paddle forming parallel or crisscrossing patterns. Nonoverlapping, parallel impressions are the most common. Cords range from 1.5 to 2.5 mm in diameter with the impressions usually shallow and indistinct due to the leatherhard condition of the clay when paddled. Sometimes the cordmarkings do not extend to the lip, but the lip edge and 1 to 2 cm of the exterior is smoothed.

Interior—Hand smoothed but uneven and irregular; a few scraped.

**Decoration:** Finger pinchings, gashes or nicks along the lip, rim exterior or neck on about half of the rim sherds.

**FORM:**

**Rim and lip:** Rims quite irregular and uneven.

1. Round, round-pointed or flat-top lip with rounded edges with either a recurved or vertical rim. A few incurved slightly. Mouth diameters 24 to 32 cm.
2. Sometimes a slightly external thickened lip. Rim typically vertical or slightly recurved, forming a short neck. Mouth diameters 26 to 34 cm.

**Body wall thickness:** Range 0.5 to 1.0 cm. Majority 0.7–0.8 cm.

**Body diameter:** Range 24 to 36 cm.

**Base:** Rounded, usually slightly thickened.

**Appendage:** Rounded, loop handles from the lip, or just below the lip, to the shoulder on a large percentage of sherds. Occasionally, a strap handle, measuring 1.5 to 2 cm wide in central portion, expanding slightly at points of juncture with exterior surfaces. Small nodes,

single or paired, 1.5 to 2 cm high, sometimes applied just below the lip.

**Shape:** Round jar with a globular body; orifice smaller than the body diameter, recurved, slightly incurved or vertical rim.

## New River Fabric Impressed

**PASTE:** Same as New River Knot Roughened and Net Impressed (below).

**SURFACE:**

**Color:** Exterior—Majority a dull, dirty, gray-tan with some either gray-black or a lighter tan.

Interior—A grayish hue predominates; either gray-tan or gray-black.

**Treatment:** Exterior—Impressed with a fabric of the plain plaited or twined variety but in most cases impossible to distinguish the two. Often the fabric has been applied several times in one area, as if wrapped on a paddle or around the hand, defacing the individual impressions. Occasionally, surface swiped-over afterward, obliterating in part the fabric impressions.

Interior—Smoothed but usually uneven and irregular; a few scraped, leaving faint striations.

**DECORATION:** About half the sherds finger pinched, nicked, or gashed along the neck or rim exterior.

**FORM:**

**Rim and lip:**

1. Rounded or flat top with round edges; recurved or vertical rim forming a short neck. Mouth diameters 22 to 28 cm.
2. Sometimes a slightly externally thickened flat or rounded lip. Usually uneven and crudely applied. Typically, a short, vertical or slightly recurved rim. Mouth diameters range from 20 to 32 cm.

**Body wall thickness:** Range 0.5 to 1.0 cm. Majority 0.7 to 0.8 cm.

**Body diameter:** Range 24 to 36 cm.

**Base:** Rounded, usually slightly thickened.

**Appendage:** Sometimes a rounded loop handle from lip to shoulder.

**Shape:** Round jar with globular body; orifice smaller than the body diameter and either a recurved, slightly incurved, or vertical rim.

## New River Knot Roughened and Net Impressed

**PASTE:**

**Method of manufacture:** Irregular cleavage, coil lines not easily distinguished. Some coiled, but the majority suggest modeling or patchings in part evident by the irregular body wall thickness of each sherd.

**Temper:** Crushed shell with particles ranging from fine flakes to large hunks 6 to 8 mm in length. Flaky particles usually oriented parallel to the vessel walls and fairly well distributed throughout the paste mixture. Some leaching.

**Texture:** Paste flaky and clayey; fairly hard to break; medium fine texture; fine particles of temper often exposed on the surfaces.

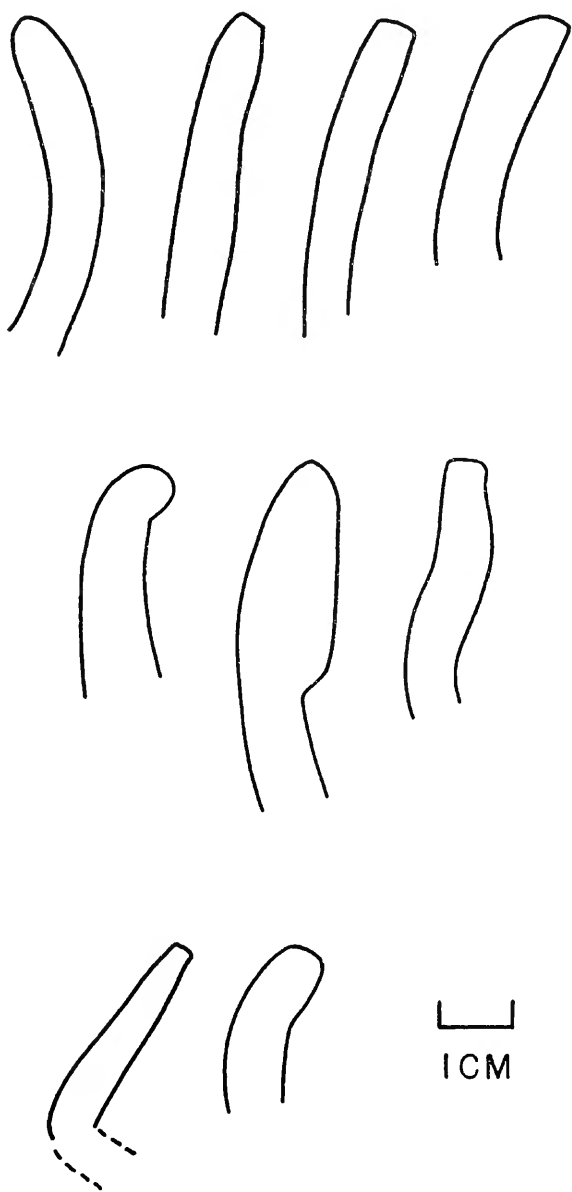


FIGURE 17.—Rim profiles of New River Knot Roughened and Net Impressed sherds. Interiors to left.

*Color:* Gray to gray-black core of 1 to 3 mm wide with a lighter gray-tan exterior and interior; a few gray to gray-black entirely.

*Firing:* Incomplete in a poorly controlled oxido-reducing atmosphere.

*Hardness:* 2.5 to 3.

**SURFACE:**

*Color:* Exterior—Majority a dull gray-tan with some either gray-black or lighter tan.

Interior—A grayish hue predominates; either gray-tan or gray-black.

*Treatment:* Exterior—Majority paddled or rubbed with a knotted net, leaving a coarse, rough surface with impressions of knots and a few of the mesh lines. Usually the mesh of the net is obliterated, suggesting roughening

with a crumpled net. Only a few impressed carefully leaving each mesh distinct (Plate 12 *h, i*).

Interior—Smoothed but usually irregular; some scraped on interior, leaving striations.

**DECORATION:** Present on about half the rim sherds.

1. Finger pinchings along the lip, lower edge of the folded-over rim, or along the collar.
2. Gashes or nicks along the lip, rim, or collar.

**FORM:**

*Rim and lip* (Figure 17):

1. Rounded or flat-top lip with rounded edges; rim either recurved or vertical forming a short neck with an orifice smaller than the largest body diameter. Mouth diameter range from 14 to 30 cm.
2. Sometimes a slightly externally thickened flat or rounded lip. Typically, a short vertical or slightly recurved rim.

*Body wall thickness:* Range 0.5 to 1.0 cm. Majority 0.7–0.8 cm.; however, great variation on each sherd.

*Body diameter:* Range 24 to 36 cm.

*Base:* Rounded, usually thickened.

*Appendage:* Usually rounded (average diameter 1.5 cm) loop handles from the lip, or just below the lip, to the shoulder. In a few cases the handle is the strap type measuring 1.5 to 2 cm in width. Small protruding nodes, 1 to 1.5 cm high and sometimes 1.5 cm base width, are applied either singly or in pairs below the lip.

*Shape:* Round jars with globular body, short to medium neck, orifice smaller than greatest body diameter, and a recurved or vertical rim.

**New River Plain**

**PASTE:** Same as New River Knot Roughened and Net Impressed (p. 61).

**SURFACE:**

*Color:* Exterior—Majority a dull, dirty gray-tan; rarely gray-black or light tan.

Interior—A grayish hue predominates; rarely gray-tan or gray-black.

*Treatment:* Both surfaces smoothed over but still fairly uneven and irregular. Sometimes the surface, especially the interior, is scraped with the striations fairly prominent.

**DECORATION:** Rim gashes, neck punctates, and rim modeling occur occasionally (Plate 12 *m, n*).

**FORM:**

*Rim and lip* (Figure 18):

1. Rounded lip with either a slightly recurved or vertical rim.
2. Sometimes a slightly externally thickened lip. Rim typically vertical or slightly recurved with the orifice smaller than the body diameter. Mouth diameters 24 to 32 cm.

*Body wall thickness:* Range 0.5 to 1.0 cm. Majority 7 to 8 cm.

*Body diameter:* Range 24 to 36 cm.

*Base:* Rounded and usually slightly thickened.

*Appendage:* None found on limited sherd sample but probably the typical strap handle form of the New River Series. Additional appendages found during the present



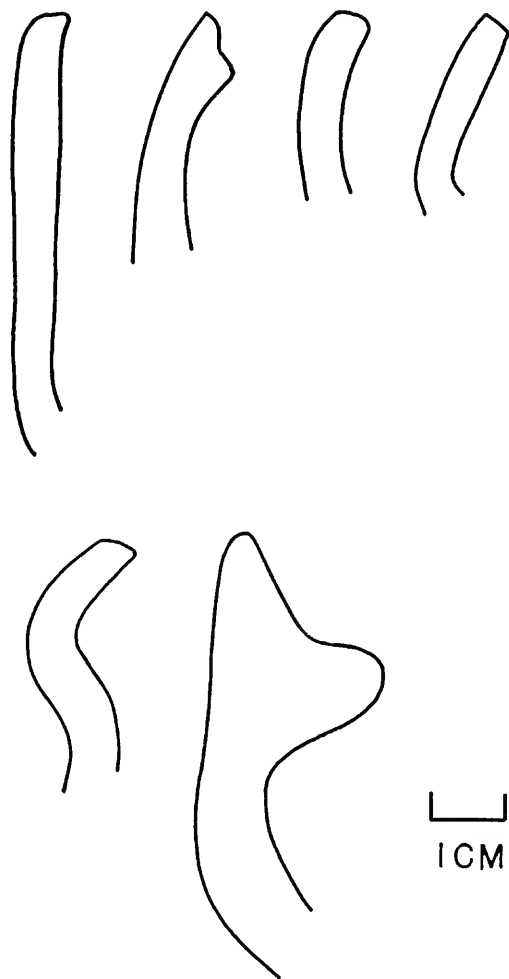


FIGURE 18.—Rim profiles of New River Plain sherds. Interiors to left.

survey include elongated lugs (Plate 12, *j*), and nodes (Plate 12, *k*).

*Shape:* Round jar with globular body, orifice smaller than the body diameter, a recurved, slightly incurved, or vertical rim.

#### GEOGRAPHICAL DISTRIBUTION OF THE NEW RIVER SERIES

The New River Series is distributed almost region-wide as shown on Figure 19. The higher percentages occur in the western part, adjacent to West Virginia where the New River flows out of Virginia. Solecki's survey (1949, p. 401) records even higher percentages, from 84.5 to 100 percent, on his sites in West Virginia than were found in the survey. Another area of higher percentages is in the southwestern angle of Virginia where the Powell and Clinch Rivers flow into Tennessee. These indicate that the ware entered the survey area via two routes, one along New River, the other by way of the Tennessee River of which the Powell and Clinch Rivers are two source streams.

#### CHRONOLOGICAL POSITION OF THE NEW RIVER SERIES

From the seriation studies this ware appears to be older than the limestone-tempered Radford Series in the central portion of the survey area where a single carbon-14 date indicates this latter ware had an inception about A.D. 1330  $\pm$  120 years (SI-130; Site Pu-9, Level 18-24 inches). For the Piedmont Uplands, further east, the New River Series is found at the top of the seriation diagram, near or in the historic

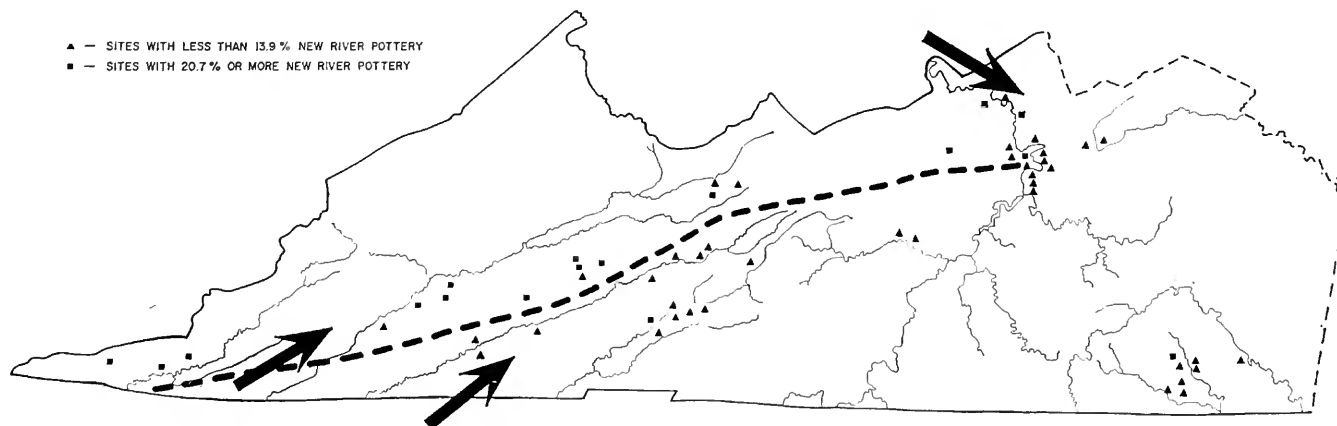


FIGURE 19.—Geographical distribution of New River Series pottery. Heavy dashed line is the approximate separation of sites with 13.9 percent or less of pottery type (triangles) to east, and 20.7 percent or more of pottery type (squares) to west. Arrows indicate direction of movement into the area.

period, and it is more recent in this area. Since this series spread from west to east it seems likely that the material on sites in the western part are older than that from the central and eastern sectors, but a definite date is not known.

### Radford Series

Evans (1955, pp. 64–69) describes this series as a group of pottery types characterized by gray to gray-tan color, a gray to black core resulting from incomplete firing. There is a crushed limestone temper and there are diagnostic rim and vessel shapes.

#### Radford Cordmarked

**PASTE:** Same as Radford Knot Roughened and Net Impressed (p. 65).

**SURFACE:**

**Color:** Exterior—Majority a dull, dirty gray-tan or gray; only a few orange-tan.

Interior—Majority tend to be gray-tan; about 10 to 15 percent gray-black.

**Treatment:** Exterior—Surfaces haphazardly beaten with a cord-wrapped paddle without too much overlapping and crisscrossing. Cords, a simple-twisted, two-strand cord with the majority 2.5 mm in diameter; some range as low as 1.5 mm in diameter. Impressions fairly shallow, due to application when clay leather-hard. Sometimes cordmarkings do not extend to lip (Plate 13 c–f).

Interior—Hand smoothed, but uneven and irregular; temper particles often protrude. A few scraped, leaving an uneven surface.

**DECORATION:** Typically none: occasional finger pinching along the lip, collar or lower edge of folded-over rim. A few nicked with a sharp pointed stick along the lip (Plate 13 d, f).

**FORM:**

**Rim and lip** (Figure 20): Each rim very irregular with a great variety of shape.

1. Rounded or round-pointed, unthickened rims, either incurving or slightly recurved. Mouth diameters 24 to 28 cm.
2. Folded-over or externally thickened with a coil. Crudely applied or unevenly folded with a larger thickening at the lower edge of the coil. Lip shape highly irregular, usually flat top with only slightly rounded edges. Rim typically short, vertical necks or slightly recurved. Mouth diameters 24 to 36 cm; rim thickness up to 1.5 cm.

**Body wall thickness:** Range 0.5 to 1.0 cm. Majority 0.7 to 0.8 cm, with wide variation on each sherd.

**Body diameter:** Range 24 to 36 cm; majority 26 to 28 cm.

**Base:** Rounded and usually thickened, sometimes round-flattened.

**Appendage:** Occasionally rounded loop handles from lip edge, or just below it, to the shoulder. Strap handles in

the same position as the loop ones are sometimes found. Small nodes, 1.5 cm wide and high, and either paired or single, are attached just below the lip.

**Shape:** Round jars with globular body, short to medium neck, an orifice smaller than the largest body diameter and usually a vertical or slightly recurved rim.

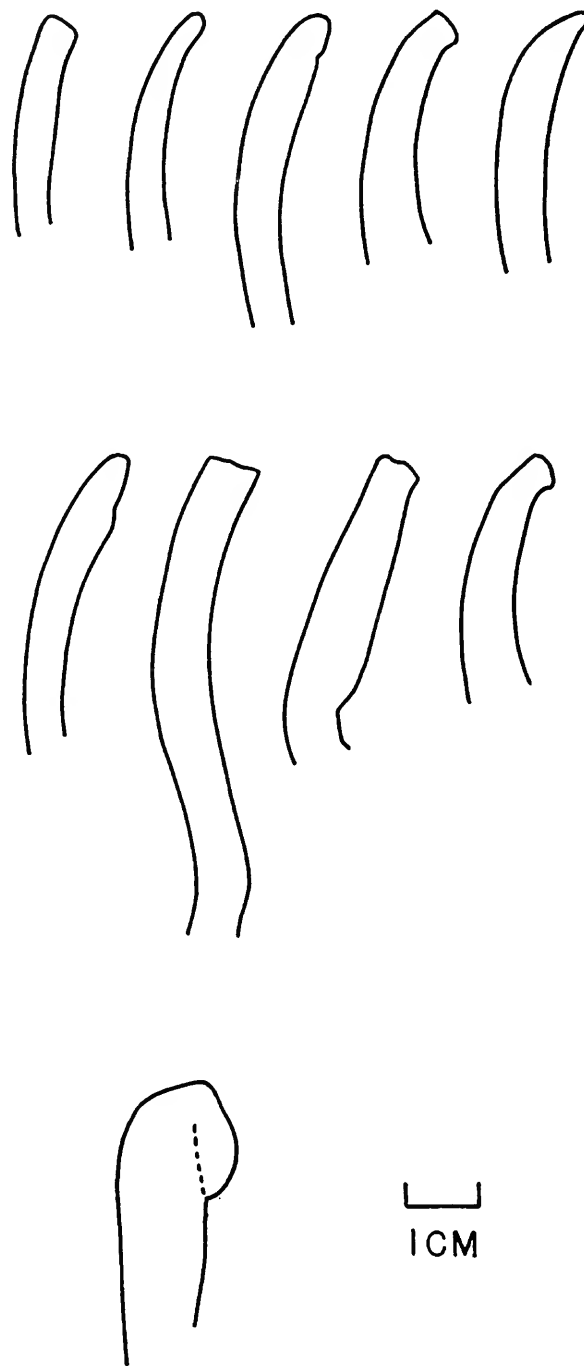


FIGURE 20.—Rim profiles of Radford Cordmarked sherds. Interiors to left.

**Radford Fabric Impressed**

**PASTE:** Same as Radford Knot Roughened and Net Impressed (see below).

**SURFACE:**

**Color:** Exterior—Majority dull, dirty gray-tan or gray; only a few light tan.

Interior—Majority gray-tan to gray-black; all have a grayish hue.

**Treatment:** Exterior—Impressed with a plain-plaited or twined fabric. Usually impossible to distinguish the type of weave, for the impressions are sloughed, faint, or sometimes handwiped after impression. The majority suggest that the fabric was wrapped around the hand or a paddle and then beaten or rubbed against the exterior of the vessel.

Interior—Smoothed but irregular and uneven. A few scraped.

**DECORATION:** Sometimes finger pinched or incised gashes along the rim exterior.

**FORM:**

*Rim and lip:*

1. Rounded or flat-top lip with rounded edges with either a recurved or vertical rim. Mouth diameters 22 to 26 cm.
2. Folded-over or externally thickened rim with a flat or rounded lip, reaching 1.5 to 1.8 cm at the lower edge. Usually uneven and quite irregular. Mouth diameters 20 to 32 cm.

**Body wall thickness:** Range 0.5 to 1.0 cm. Majority 0.7 to 0.8 cm.

**Body diameter:** Range 25 to 32 cm.

**Base:** Rounded and usually thickened.

**Appendage:** Sometimes round loop or strap handles from lip, or just below it, to shoulder (Plate 13 g).

**Shape:** Round jar with globular body; orifice smaller than the body diameter and either a recurved, slightly incurved or vertical rim.

**Radford Knot Roughened and Net Impressed**

**PASTE:**

**Method of manufacture:** Very irregular cleavage, coil lines not easily distinguished. Without any doubt, some coiled; majority suggest hand modeling or patching, as is quite evident from the irregular and uneven body walls.

**Temper:** Crushed limestone. Angular particles range from less than 1 mm to 5–6 mm. Distribution of temper appears as if all sherds have some large, angular hunks, with the total temper mixture about 25 percent of the paste. A few sherds are leached, but the angular holes easily distinguish the paste from leached shell-tempered material. In some cases the limestone was so heavily embedded with fossil shells that the temper suggests shell; however, in this report shell temper has always referred to fresh, unfossilized shells.

**Texture:** Fairly compact paste, not friable, clayey feel; when dropped the sherds have a low flat dull, pasty "ring," but are hard to break, due to a good paste mixture. Decided angular and jagged cleavage from the irregular temper particles is a noticeable feature of the series.

Very fine traces of white mica in the clay give a faint sparkle to many of the sherds.

**Color:** All have some degree of a gray to gray-black core. In 75 percent of the type samples there is a thin black core 2 to 3 mm wide with a lighter gray-tan zone extending to the exterior and interior. The remaining sample cores are almost the full width of the cross-section with a paper-thin gray-tan or light-gray surface.

**Firing:** Incomplete, in a poorly controlled oxido-reducing atmosphere.

**Hardness:** 3–3.5.

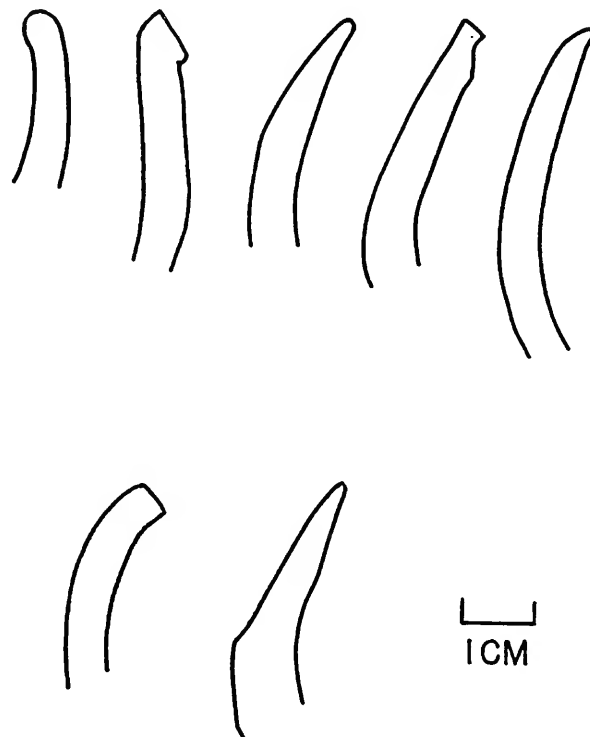


FIGURE 21.—Rim profiles of Radford Knot Roughened and Net Impressed sherds. Interiors to left.

## SURFACE:

*Color:* Exterior—75 percent dull, dirty, gray-tan; 20 percent gray; 5 percent orange-tan.

Interior—Majority tend to be gray-tan with about 10 to 15 percent gray-black.

*Treatment:* Exterior.

1. Surface beaten with either a net-covered hand or paddle, creating a haphazard, overlapping, rough surface with knot and cord impressions. Surface usually roughened to a depth of 1 to 1.5 mm and apparently treated when leather-hard. In some cases the knotted fabric seems almost too fine for net mesh, but the separate weave is distinguishable. Since the treatment in no way resembles impressions made by any of the fabrics normally distinguished under the fabric-impressed types, it is classified as a knotted fabric more closely related to netting than any other woven material. Caldwell (1951, p. [7]) designates this knot-roughened surface as "fabric impressed with a knotted fabric," but it seems the category of knot roughened and net impressed is more appropriate (Plate 13 *a, b*).

2. Same treatment as No. 1 but partially smoothed over by hand swipings afterward.

3. Wet surfaces, impressed with a diamond or square mesh, knotted net fabric leaving deep distinct impressions of the knots and cords. Mesh ranges from 0.3 to 1.2 cm; deepest knot impressions around 3 mm, usually 2 mm. A few net impressions suggest a looped net.

Interior—Smooth with very irregular and uneven surfaces with the larger temper particles protruding. The irregular surface is a diagnostic feature of the type. A few scraped on interior appearing as if some attempt made to remove irregularities.

## DECORATION:

1. Finger pinchings along the lip, or lower edge of folded-over rim or on the collar. Similar technique used on the Clarksville Series.
2. Small gashes or nicks along the lip or on the exterior face of upper rim made with a small, round, or pointed stick.
3. Rarely a raised rib on the rim with gashes on it.
4. Sometimes a few lightly incised lines near the lip.

## FORM:

*Rim and lip* (Figure 21): Great variety and irregularity on each sherd.

1. Rounded or flat top with rounded edges with some slight external protrusion or thickening on the exterior lip edge. All these tend to be vertical or recurved forming a short prominent rim. Only a few slope in at the mouth. Mouth diameters range from 14 to 30 cm; majority 22 to 26 cm.
2. Folded-over or externally thickened with a coil reaching 1.5 to 1.8 cm in thickness. Very crudely applied and the folding-over is the less frequent method of thickening. Lip very irregular, ranging from slightly tapered, thin, round-point, to flat top with rounded edges, to rounded. Rim typically inslanting, vertical or slightly recurved rim. Mouth diameters range from 20 to 32 cm.

*Body wall thickness:* Range 0.5 to 1.0 cm. Majority 0.6 to 0.8 cm.

*Base:* Rounded and usually thickened; sometimes round-flattened with a slight suggestion of platform.

*Appendage:* Occasionally, rounded (1 to 1.5 cm in diameter) loop handles from the lip, or just below it, to shoulder on opposite sides. Sometimes a straplike handle, 1.5 to 2.0 cm wide, in the same respective position as the loop handle. On a few rims small, paired or single, nodes about 1.5 cm high and wide are just below the lip.

*Shape:* Round jars with globular body; an orifice smaller than body diameter, and either a recurved, slightly inslanting, or vertical rim.

## Radford Plain

*PASTE:* Same as Radford Knot Roughened and Net Impressed (p. 65).

## SURFACE:

*Color:* Exterior—Majority a dull, dirty gray-tan or gray. Interior—Gray-tan to gray with a few gray-black.

*Treatment:* Exterior and interior smoothed, but uneven. Hand and finger swipings evident. Each sherd varies in thickness considerably (Plate 13*h*).

*DECORATION:* Rim nicked or with slight diagonal gashes. A few body sherds incised with a sharp instrument in parallel lines.

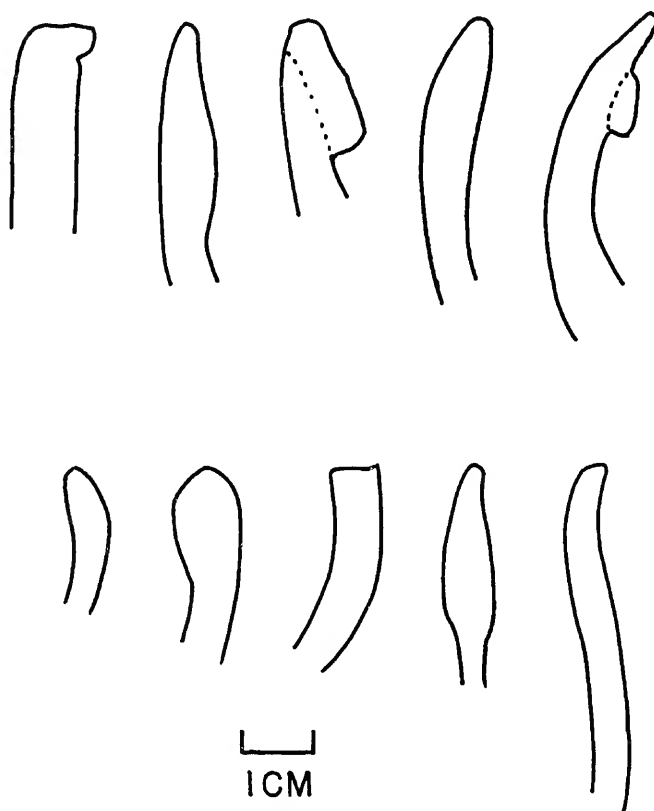


FIGURE 22.—Rim profiles of Radford Plain sherds. Interiors to left.

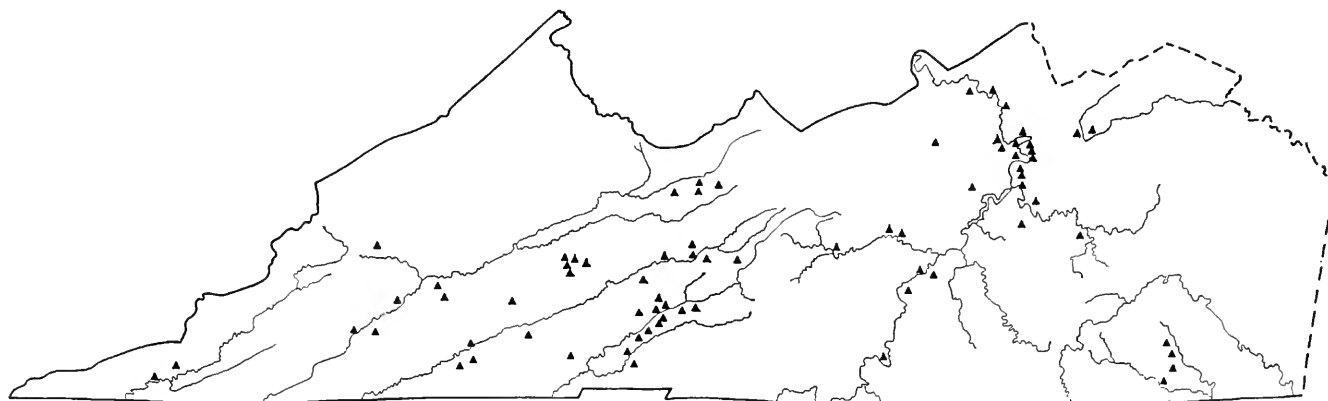


FIGURE 23.—Geographical distribution of Radford Series pottery. Triangles indicate sites with this series.

#### FORM:

*Rim and lip* (Figure 22): Rounded and unthickened, or more commonly a folded-over or exteriorly coil-thickened rim with a flat top, round-edged lip. Usually vertical or slightly recurved rim forming a short neck.

*Body wall thickness:* Range 0.5 to 1.0 cm. Majority 0.7 to 0.8 cm with wide variation on each sherd.

*Body diameter:* Range 24 to 36 cm.

*Base:* Rounded and usually slightly thickened.

*Appendage:* Occasionally, round loop or strap handles from lip, or just below it, to shoulder.

*Shape:* Round jar with globular body; an orifice smaller than the largest body diameter, and usually a vertical or slightly recurved rim.

#### Radford Scraped

*PASTE:* See Radford Knot Roughened and Net Impressed (p. 65).

*Color:* See Radford Knot Roughened and Net Impressed.

#### SURFACE:

*Treatment:* Exterior—Scraped with a narrow tool having a rough edge. The direction of individual strokes is haphazard.

*FORM:* Unknown.

*NOTE:* This type is described in addition to Evans' original descriptions (1955, pp. 64–69).

#### Radford Stamped

*PASTE:* See Radford Knot Roughened and Net Impressed (p. 65).

*Color:* See Radford Knot Roughened and Net Impressed.

#### SURFACES:

*Treatment:* Exterior—(1) Marked with a root- or thong-wrapped paddle, or (2) fragmentary curvilinear designs of a grooved paddle or (3) a paddle with carved straight grooves. The sample is so small and the sherds so fragmentary it is impossible to reconstruct the total designs.

Interior—smooth.

*FORM:* Unknown.

*NOTE:* These types are described in addition to Evans' original description (1955, pp. 64–69).

#### GEOGRAPHICAL DISTRIBUTION OF THE RADFORD SERIES

This series, like the New River Series, is found over almost the entire survey area (Figure 23). The greatest deposition is found through the central portion associated with the Clinch, North Fork of the Holston, New, and Roanoke Rivers. On New River, as one goes downstream into West Virginia the deposition lessens until it is no longer present (Soleki, 1949, p. 401). It apparently is represented on sites in the Norris Dam basin in eastern Tennessee, but direct comparison between this localized area and the survey area is difficult because of the different analytical techniques employed (Griffin, in Webb, 1938, pp. 253–257). East of the Blue Ridge Mountains, on the Piedmont Uplands, a few sites have low percentages of this series, and south of the entrance of Little River into New River it was not found. This series, or a related ware, Page Cordmarked, is found on sites northeast of the survey area in the Valley Province (Manson, MacCord, and Griffin, 1943; Holland 1960).

The present indications are that the ware probably entered the area from the southwest, along the Tennessee drainage.

#### CHRONOLOGICAL POSITION OF THE RADFORD SERIES

The earliest date for this ware is A.D.  $1330 \pm 120$  years (SI-130, Site Pu-9, Level 18–24 inches). According to the seriation study, this series persisted into the historic period.

#### Smyth Series

This series has been mentioned by Evans (1955, p. 135) as a North Carolina ware. It apparently has not

been described in the literature and it is described here as the Smyth Series. It is a group of pottery types having a steatite temper, fired in an incompletely oxidizing atmosphere, and with specific vessel shapes.

This is one of two steatite-tempered series found in the Middle Atlantic states region. The other is the Marcey Creek Series (Evans, 1955, pp. 54-57), with pots copied after the steatite vessels that preceded them, which has its center in New Jersey, and spreads from there north into New York, and as far south as Virginia. Potsherds of this series are found in the Valley Province north of the survey area (Holland, 1960, p. 61) but none were recovered in southwest Virginia.

#### Smyth Net and Knot Roughened

##### PASTE:

*Method of manufacture:* Coiling. Many sherds fracture along the coil junctions, indicating a definite plane of weakness at these intervals.

*Temper:* Crushed soapstone. As a general rule it is finely crushed, or even pulverized, but some sherds have hunks of temper ranging from 2 by 3 by 5 mm to 10 by 10 by 5 mm in size, the larger penetrating the wall of the pot and appearing on opposite surfaces. The temper makes up to 50 percent of the paste in some sherds.

*Texture:* The clay is compacted and well mixed, with enough sand to give some sherds a "sandy" feel on one surface. Other sherds of the sample, however, are slick and "soapy." The glitter from micaceous inclusions in the soapstone is more prominent in this series than the others. When a sherd is dropped there is no ring associated, but rather a dull thud.

*Color:* Grey-black to buff, with the sherds about equally divided between these two colors.

*Firing:* Well controlled, but incompletely oxidized, as most sherds show uniform firing characteristics. A few sherds have a 1 to 3 mm layer of oxidation on the exterior while the remainder is incompletely oxidized.

*Hardness:* 3.5.

##### SURFACES:

*Color:* Grey-black to buff. Some are buff exteriorly and grey interiorly, but the majority have the same color on both surfaces.

*Treatment:* Exterior—Impressed with a knotted net while the clay was quite plastic, producing pits which are 1 to 3 mm deep and 2 to 4 mm wide (Plate 13 i, j). The net's mesh is square with an interval of 0.5 to 1.0 cm between the knots. The strings are 1 mm wide but the twist could not be determined. Sometimes net impression was reapplied over the same area. Frequently, a swiping or smoothing of the surface afterward obliterated some of the net impressions and left the pits and impressions of the strings partially filled in with paste.

Interior—A majority are smooth, but some show scraping with either a single ended tool, flat stick, or serrated tool, the type of which could not be determined.

##### FORM:

*Rim and lip* (Figure 24): Flat or rounded lips without incisions is the rule. Variations include shallow nicks 13

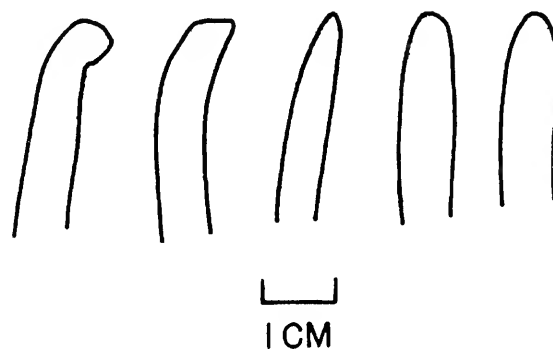


FIGURE 24.—Rim profiles of Smyth Net and Knot Roughened sherds. Interiors to left.

mm apart, net roughened on the lip, and rolled to the exterior. Usually the rims and necks form a straight wall with the body wall. A few rim sherds are everted.

*Body wall thickness:* Range 5 to 10 mm; majority 7 to 8 mm. The walls are uniformly thick on each sherd.

*Body diameter:* 16 to 30 cm.

*Base:* Rounded.

*Shape:* Open-mouthed bowls with straight sides or with short rims and slightly constricted necks. Both shapes apparently have rounded bottoms.

#### Smyth Plain

PASTE: See Smyth Net and Knot Roughened.

##### SURFACES:

*Color:* Grey to buff. The color extends completely through the sherd's cross-section, excepting a few that have a 1 to 3 mm buff exterior and the remainder grey.

*Treatment:* Exterior—Completely smoothed but not burnished.

Interior—Even surfaced, with occasional sherds showing striations from a toothed tool, but these marks have been partly erased by later smoothing.

##### FORM:

*Rim and lip* (Figure 25): Flat lips. The effort to flatten them had a tendency to spread the paste beyond the rim so that the lips are slightly wider than the rim. Rims are vertical.

*Body wall thickness:* 5 to 10 mm; majority 7 to 8 mm.

*Body diameter:* 26 to 40 cm.

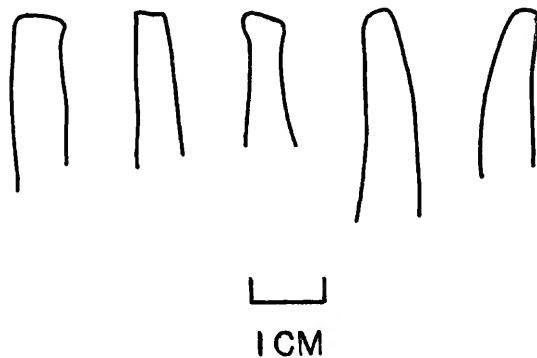


FIGURE 25.—Rim profiles of Smyth Plain sherds. Interiors to left.

*Base:* Rounded.

*Shape:* Probably open-mouthed bowls with straight sides and rims or gently everted rims and straight walls.

**OCCASIONAL DECORATION:** Two types of decoration run around the rim. One is a series of circinate pictures 3 mm in diameter, punched 3 mm deep into the clay and spaced 3 mm apart. The other type are gashes 8 mm long and 15 mm apart. There are occasional criss-crossing incisions (Plate 13 *l, m*).

#### Smyth Scraped

**PASTE:** Same as Smyth Net and Knot Roughened (p. 68).

**SURFACE:**

*Color:* Grey to buff.

*Treatment:* Exterior—Scraped with a toothed instrument leaving irregular furrows and ridges less than a millimeter deep and about a millimeter apart. Application is haphazard on most sherds, parallel on others. The clay was leather-hard when scraped (Plate 13*k*).

Interiors—All sherds show that the same tool was used to scrape the interiors too. The furrows and ridges on this surface are more or less parallel.

**FORM:** Sherd sample is too small to reconstruct. There were no rim sherds in the sample.

#### GEOGRAPHICAL DISTRIBUTION OF THE SMYTH SERIES

Plotted on the map (Figure 26) the Smyth Series is related to the North, Middle, and South Forks of the Holston River, as well as the New, and Roanoke Rivers. It is never abundant; the highest occurrence at 35.4 percent is at Site Sm-5 at a depth of 6 to 12 inches. The distribution is a north-south band through the middle of southwest Virginia. The direction of movement into this area appears to have been from western North Carolina and eastern Tennessee into the survey area. The data at hand does not allow one to predict how far this cultural expression penetrated

the Roanoke River basin, but it is known that it did not descend the New River beyond the survey area since Solecki (1949) did not discover it on sites in Giles County, Virginia, and the adjacent West Virginia counties. A previous survey in the Valley Province to the northeast also did not uncover any Smyth Series pottery (Holland, 1960).

#### CHRONOLOGICAL POSITION OF THE SMYTH SERIES

The highest seriation frequencies for the Smyth Series appear at the bottom of the charts on which it is graphed (Figures 7, 27). An estimate of its chronological position, from carbon-14 dates available for the survey area, is in the range of A.D. 1200 to 1400.

#### Wythe Series

The Wythe Series is a group of pottery types with a compact paste, sand temper, fired in a reducing atmosphere, and with specific vessel shapes.

Previously, at the Cornett Site, Wg-1 in this survey, Evans (1955, table 1, p. 149) separated 193 sherds which he placed under a North Carolina Linwood Focus. From this same site, 239 sand-tempered sherds and 7 Radford Series sherds were picked up during the present survey. These sand-tempered sherds were analyzed along with the remainder of the ceramics, plotted as to geographical distribution and seriated. The final result was the appearance of what seems to be a new series of pottery for the area. This has been called the Wythe Series because of its greatest popularity in this county.

#### Wythe Cordmarked

**PASTE:**

*Method of manufacture:* Mainly by coiling. This is indicated by the "tongue and groove" effect on the edges of sherds

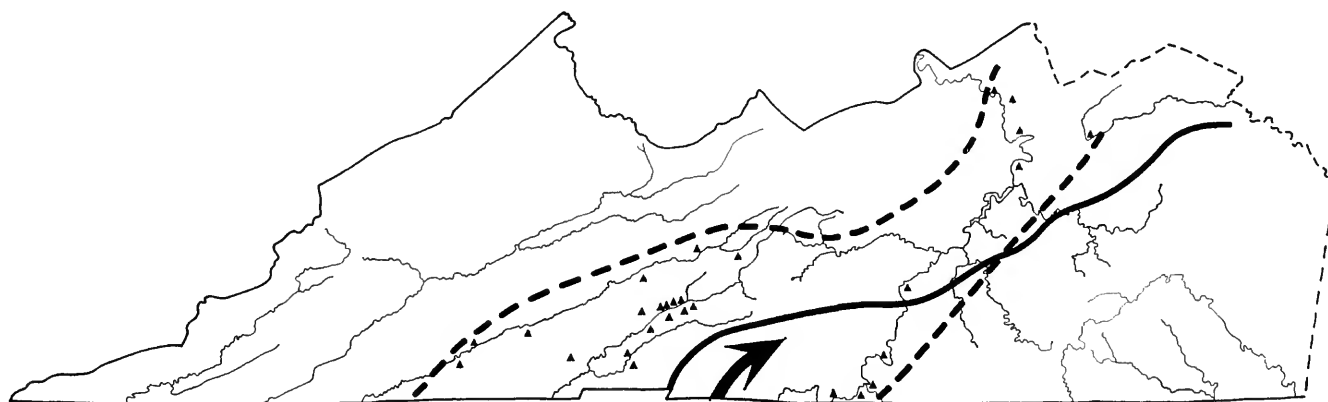


FIGURE 26.—Geographical distribution of Smyth Series pottery. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east. Heavy dashed lines indicate the geographic band in which it was found. Triangles are sites with Smyth Series pottery. Arrow indicates probable direction of movement.

which have been fractured along lines of the flattened coils.

*Temper:* Fine sand, well mixed with the clay, leaving no gritty surface. Mica is prominent in some sherds, absent in others, but does not appear to be an intentional inclusion.

*Color:* Most are grey to buff, with grey predominating. Rarely there is a completely black sherd.

*Firing:* Thin sherds show complete oxidation while the thicker sherds show: (1) oxidation on the outside, 1 mm deep with the remainder of the cross-section reduced; (2) oxidized on both inner and outer surfaces with a grey core; and (3) no evidence of oxidation, the entire cross-section being grey or black. There is an occasional fire cloud.

*Hardness:* 2.5–3.0.

*SURFACE:*

*Color:* Same as paste.

*Treatment:* Exterior—Cords applied in closely parallel rows at angles to the fracture lines of coils (Plate 14e). An occasional sherd will have an overlapping application. The twisted threads have 2 to 5 S-twists to a centimeter, the finer the thread, the higher the number of twists. Application of the cordwrapped paddle covered the entire outer sherd surfaces.

Interior—The majority are completely smooth and free of tool marks but an occasional sherd shows linear indentations of a scraping tool.

*FORM:*

*Rim and lip:* No lips in the sample, but a fragmentary sherd shows a slightly constricted neck with an everted rim.

*Body wall thickness:* Majority 6–7 mm.

*Body diameter:* Range 22 to 32 cm.

*Base:* Probably thickened to 9–10 mm and rounded.

*Shape:* Globular pots with slightly constricted necks.

#### Wythe Fabric Impressed

*PASTE:*

*Method of manufacture:* Predominantly by coiling.

*Temper:* Fine sand with grains as large as 1 mm rare.

Temper well distributed throughout the paste. Hard to break. Mica content ranges from none to prominent.

*Texture:* Well compacted.

*Color:* Most sherds are grey, but there is a continuum from black to buff as well as an occasional orange-colored one.

*Firing:* Most sherds have a uniformly grey cross-section. A few have an oxidized inner and outer shell 1 to 3 mm thick, leaving a grey to black core, indicating incomplete oxidization.

*Hardness:* 2.5–3.

*SURFACES:*

*Color:* Same range as paste.

*Treatment:* Exterior—Fabrics of four types had been used.

1. Most frequently used was a loosely woven corded fabric about 3 mm thick patted irregularly onto the surface so that warp and woof are actually indistinguishable. The pattern is overlapping in parallel arrangement, but sometimes is criss-crossing.

2. A plain plaited, or twined fabric repeatedly applied to the same area thus defacing the individual impressions.
3. A fabric with a well-defined warp and woof. The strings are 1 mm wide with a Z-twist, four twists to a centimeter. The woof may be either single or double strand, interlocking with the warp at 0.5 to 1.0 cm intervals. The woof is closely woven, the strands being side by side or separated by a 1.0 mm interval.
4. A fabric in which there are three to four strands of woof to a centimeter. The strings are 2 mm wide but the twist is indeterminate. The warp has two strands, one of which goes alternately under, then over, each strand of the woof.

Interior—Smooth and regular, without tool marks of any kind (Plate 14 f-h).

*FORM:*

*Lip and rim* (Figure 27): Majority of the lips are flattened, but a few are rounded. With flattening there is a tendency to an external shelving or folding. Lips are sometimes incised with gashes, three to four per centimeter, either radially placed across the entire lip, or just on the outer edge. Rims all everted slightly with constriction of the necks.

*Body wall thickness:* 5 to 7 mm.

*Body diameter:* 20 to 38 cm.

*Base:* Rounded but without any obvious basal platforms.

*Shape:* Probably globular pots with slightly constricted necks.

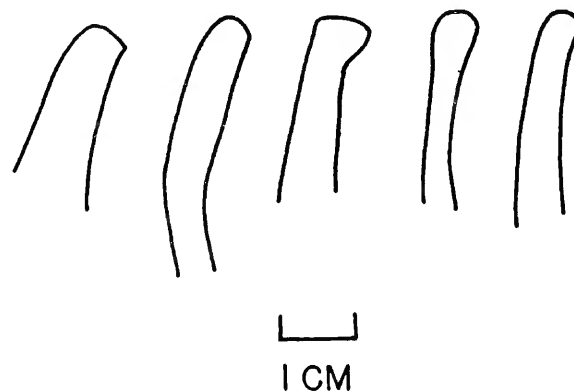


FIGURE 27.—Rim profiles of Wythe Fabric Impressed sherds  
Interiors to left.

#### Wythe Net and Knot Roughened

*PASTE:*

*Method of manufacture:* Coiling is evident on a minority of the sherds. Fractured surfaces are irregular, body surfaces are also irregular with body thickness variable on the same sherd indicating modeling and stretching.

*Temper:* Typically a fine sand, uniformly well mixed with the clay. There are local variations from site to site, with some sherds having a coarser sand and particles ranging between 0.5–1.0 mm in size. The rare occurrence of particles larger than this indicates either a well-chosen tempering trait, or if the sand occurs naturally in the clay, a well-chosen clay deposit. Fine flecks of mica are evenly distributed throughout the paste. They do not



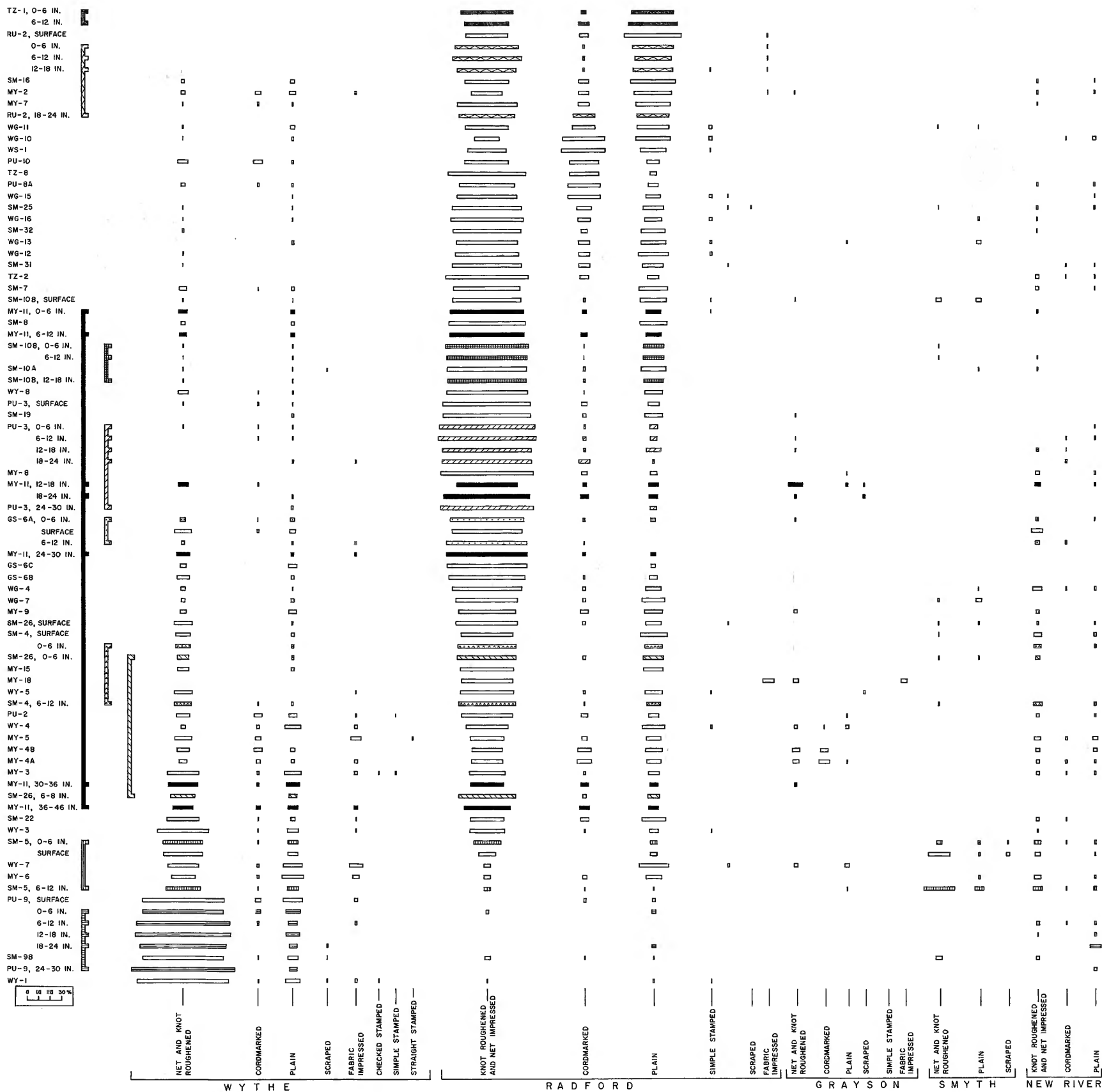


FIGURE 28.—Seriation of pottery types in the Holston-Upper New-Roanoke Rivers Ceramic Area.



appear to have been an intentional addition, but do give the paste a slight sparkle.

*Texture:* Compact, hard to break, has a sandy feel but the grains do not rub off. When dropped it has a low pitched ring.

*Color:* A continuum from black through grey to buff. At first an attempt was made to separate sherds on the basis of firing. The gradations were so gradual, however, and no other trait was found which abetted this distinction, that the effort was abandoned. The majority of the sherds are grey, followed next in descending numbers by buff, and lastly by black sherds.

*Firing:* Ranges between completely oxidized to incompletely oxidized; there is a most frequent group of sherds with an inner incompletely oxidized grey core which gradually becomes more oxidized toward both outer surfaces.

*Hardness:* 3.0–3.5.

#### SURFACES:

*Color:* Majority have a uniform color pattern depending on the conditions outlined above.

*Treatment:* Exteriors—"The exterior is rough, most frequently pocked with irregularly arranged, yet often with regularly arranged, pits which accommodated the knots and strands of nets. The nets, tied at each intersection of warp and woof, have strands 0.5 to 1.0 mm wide. The interstices between knots are 4 to 8 mm with a consistently square pattern, very rarely a looped net can be made out. The pot has been treated when the clay was pliable and the knots sank into the surface 1 to 3 mm. Most often the nets have been applied and reapplied until the surfaces are without discernible pattern yet plasticine clay lifts the curled strands of knotted threads" (Evans, 1955, p. 57, 65; Plate 14 a-c).

Interiors—The surfaces are uneven from patching and stretching. One-third of the body sherds have faint to pronounced parallel striations from scraping with a noncomb-like instrument. Hand swiping is also seen.

*DECORATION:* Infrequent. Four sherds had parallel incised lines, two sherds showed finger pinching at the neck parallel to the mouth and one sherd was decorated with parallel, oblique indentations from a cord-wrapped rope or stick.

#### FORM:

*Rim and lip* (Figure 29):

1. An everted rim with the neck of the pot 3.5 to 4.0 cm below the lip, and the angle between rim and body approaches 90 degrees. The rims may have a folded strip 2.5 cm wide with thicknesses of 7 to 10 mm. The lip is either finger pinched in one direction only around the circumference or is pinched both right and left to form small cones spaced about 1.0 cm apart. Mouth diameters 30 to 44 cm.
2. Flattened or outslipping lips which have parallel gashes obliquely or radially placed. The rims are mildly everted forming a slightly narrower neck than mouth. Measurable mouth diameters cluster at 20 to 24 cm and the rim walls are 3 to 7 mm thick.
3. Rounded or flattened undecorated lips, the former occasionally rolled exteriorly. The rims may be

incurving or everted. Mouth diameters from 12 to 26 cm and the rim walls from 5 to 7 mm thick.

*Body wall thickness:* Range from 3 mm to 12 mm.

*Body diameters:* As judged from sherd sample, 15 to 44 cm; as judged from one partially reconstructed pot, 15 cm (Plate 14m).

*Bases:* Rounded.

*Shape:* Majority are globular pots with constricted necks; minority are globular with insloping rims.

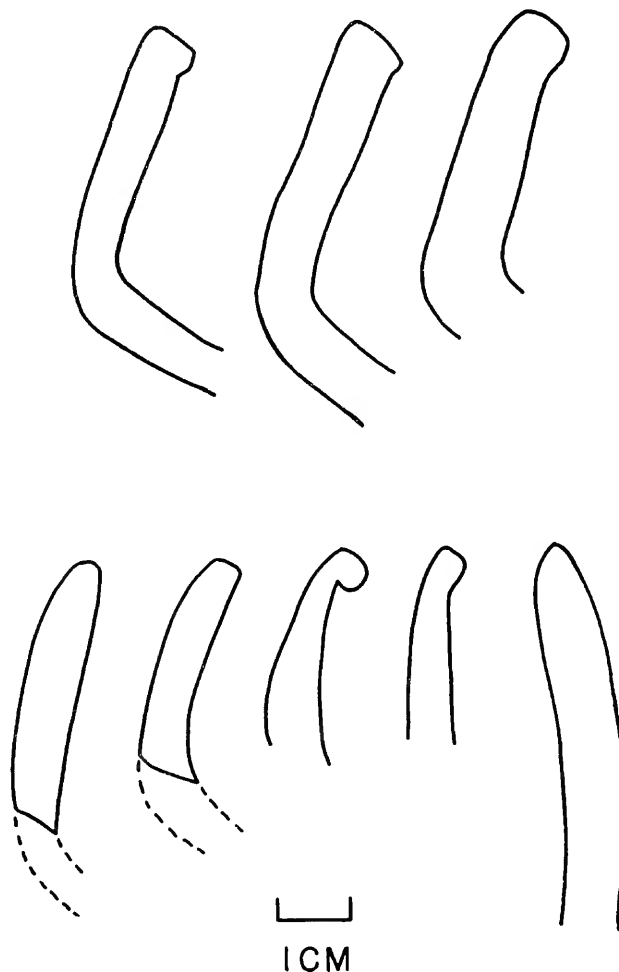


FIGURE 29.—Rim profiles of Wythe Net and Knot Roughened sherds. Interiors to left.

#### Wythe Plain

##### PASTE:

*Method of manufacture:* Modeling quite evident with fractured edges of sherds very irregular.

*Temper:* Very fine sand with less variation in particle size than in Wythe Net and Knot Roughened. Well distributed in the paste.

*Texture:* Compact, even, hard to break, has a solid "ring" when dropped, and sandy particles do not rub off.

*Color:* All gradations from black through grey to buff. Majority of sherds show that the color on the surface extends through the entire wall. In a few sherds there is a millimeter of exterior buff color with an inner grey core. The majority of the sherds are about equally divided between black and buff in color.

*Firing:* Well controlled, fire clouds are scarce; but majority are incompletely oxidized.

*Hardness:* 3.5.

*SURFACES:*

*Color:* Same as paste.

*Treatment:* Exteriors—Rubbed smooth, but many sherds show the imprint of the rubbing tool. Some of the black sherds are burnished to almost a gloss. Surfaces of few sherds had originally been treated with a net, giving a net and knot roughened surface, and then had been smoothed, leaving a pattern of small pits.

Interiors—About a fourth of the sample had been irregularly hand swiped while the remainder had either been smoothed to the point of burnishing as the exteriors, or were somewhat irregular but smoothed.

*DECORATION:* Parallel incised lines, incised lines forming angles; parallel oblique gashes; circinate indentation; one sherd had a hole made through the rim during manufacture and another has small cones modeled by finger pinching. Most of the decoration is confined to the low rim and neck area.

*FORM:*

*Rim and lip (Figure 30):* Lips are either flat with rounded edges or oval in cross-section. There is a flattened lip with a series of punctures 5 mm apart surmounting an

in-sloping rim, others show radially placed incisions. The rims are variable from in-sloping to everted. A few rims are thickened. Measurable diameters cluster in the 20 to 28 cm range.

*Appendages:* One and a half centimeters below the lip are occasional flat protrusions from 1.0 to 3.0 cm wide, running parallel to the mouth, which were apparently designed as fingertip handles.

*Body wall thickness:* Ranges from 4 mm to 12 mm.

*Body diameter:* These cluster in two groups; one 16 to 26 cm in diameter, and the second from 32 to 42 cm in diameter.

*Base:* Thickened and rounded.

*Shape:* Majority are small globular bowls with in-sloping or everted rims.

#### Wythe Scraped

*PASTE:* See Wythe Net and Knot Roughened (p. 70).

*SURFACES:*

*Color:* Predominantly grey but ranges to buff. There are no black sherds.

*Treatment:* Exterior—Scraped, leaving striations 1 to 3 mm wide. There was no consistent direction of application, some sherds showing scraping in one direction only while others had criss-crossing marks. The tool was used when the clay was leather-hard, causing the marks to be shallow (Plate 14l).

Interiors—Most were scraped with the same tool that was used on the exterior. A few sherds are completely smooth.

*FORM:* Unknown.

#### Wythe Stamped

*PASTE:* See Wythe Net and Knot Roughened (p. 70).

*SURFACES:*

*Color:* Predominantly grey.

*Treatment:* Exterior—Three varieties are recognized: a checked stamped group with small, rectangular checks (Plate 14j); a checked stamped group with larger checks (Plate 14k); and an occasional sherd paddled with linear or straight grooves and ridges in a criss-crossing fashion (Plate 14i). There are a few sherds with a simple stamped pattern.

Interiors—Smooth.

*FORM:* Unknown.

#### GEOGRAPHICAL DISTRIBUTION OF THE WYTHE SERIES

The Wythe Series is distributed along the Holston River drainage, both North and Middle Forks, and to the New River from the entrance of Reed Creek into New River, thence downstream. Where this pottery series spills over onto the drainage of Clinch River it is found in small percentages as at Sites Ws-1 with 1.4 percent, Tz-1 with 5.6 percent, Tz-2 with 1.8 percent, Ru-3 with 0.8 percent; one sherd was found at Ru-4, Ru-9 has 16.4 percent, Ru-11 has 4.5 percent, and Ru-13 has 7.1 percent. To the northeast, on

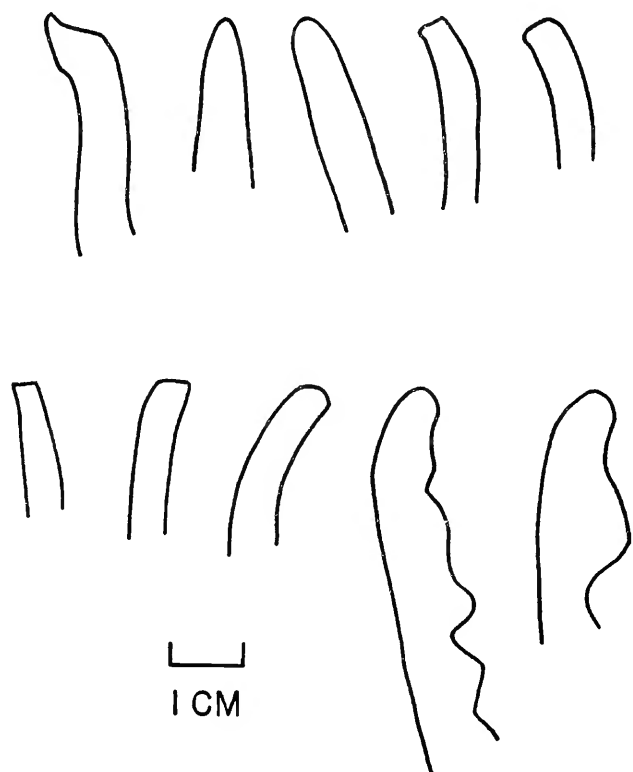


FIGURE 30.—Rim profiles of Wythe Plain sherds. Interiors to left.



FIGURE 31.—Geographic distribution of Wythe Series pottery. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east. Heavy dashed lines indicate the geographic band in which it was found. Triangles are sites with Wythe Series pottery. Arrows indicate probable direction of movement.

Roanoke River, a single Site My-9 had 15.3 percent. Other sites on this river undoubtedly contain Wythe Series sherds but were not found since the sampling of this river could not be exhaustive, due to the different problems of collecting.

The distribution of the Wythe Series is in a northeast-southwest band through the middle portion of southwest Virginia (Figure 31), overlapping slightly with Lee Series in the southwestern part of the band, and not overlapping with the Dan River Series in the northeastern sector. The highest percentage occurrences of the Wythe Series are near the central portion of this band with Site Wy-1 having 97.2 percent and Pu-9 at a depth of 24 to 30 inches having 97.0 percent of the series. Peripherally from this concentration the percentages drop and this argues for a local development of the series. Solecki's study of temper from the New River, downstream from the present survey area, shows no site with more than 0.8 percent sand temper (as at Site 46-Su-9), an indication that sand tempering probably did not enter the region via New River (Solecki, 1949, table iv, p. 401).

#### CHRONOLOGICAL POSITION OF THE WYTHE SERIES

This series, from a single carbon-14 determination, had its greatest development about A.D. 1300 (1330  $\pm$  120 years; SI-130). It preceded, and was eventually replaced by, the Radford Series as it waned in popularity through time.

#### Unclassified Pottery

##### Unclassified Sand-tempered Pottery

Two sites, Sc-3 and Sc-4, have a ware that is tempered with coarse to medium-fine sand but the

sample was too small to relate to published descriptions. Most of the sherds have been incompletely oxidized to tan or buff on the exterior surfaces to a depth of 1 to 3 mm, leaving the core a grey to black color. Interiors have been smoothed without any attempt at scoring. There are two popular exterior surface treatments, cordmarked and fabric impressed. The cords of the cordmarked group are broad, up to 5 mm wide, and loosely twisted in S-turns. The fabric marked group have "wicker" type markings which are coarse due to the broad strings. There are no decorative incisions, punctures, or finger pinchings. Of two lips, one is round, and one is flat, and the rims are straight and mildly excurvate. The exterior surface marking begins at the lips.

##### Unclassified Mica-tempered Fabric-impressed Pottery

A small sample of sherds from a single pot represents this type. The primary temper is crushed quartz, but large flakes of mica were added to the paste and glisten on all surfaces. The mica is unevenly distributed in all planes, and so concentrated in some sherds that they have caused disassociation of the paste. Most flakes are 1 mm square or less but many are 4 to 9 mm square, and some as large as 25 mm square.

The exterior was originally treated with a fabric having a 4 mm wide warp, and 10-12 threads of woof per centimeter. It was unevenly woven, showing gaps in the woof as well as knots in the cords. Both scraping with a narrow stick and hand swiping have completely obliterated the impressions on some sherds. The interiors are rough but without tool marks. The pot was made by coiling, and on one coil edge the fabric markings of the exterior may be seen, as if the coils were flattened with the fabric in hand. Color varies from buff to grey. The maximum diameter for the pot was 30 cm. The rim had been broken off (Plate 11 *l, m*).

## DELINEATION OF CERAMIC AREAS

The territory over which the various pottery series are spread tell nothing of their time depth and possible interaction. Thus while it can be demonstrated geographically that the Lee Series is entirely independent of the Dan River Series, and even if the two groups of people who made these wares lived at the same time, there is nothing to show that the first group was ever aware of the existence of the second. However, in areas where two or more series have been deposited on single sites it is possible to use quantitative techniques to develop some relative temporal relationship between them. In doing this, the areas which have been chosen (Figure 32), have been defined by the greatest percentage density, avenues of influx, and the geographical conditions of the territory independent of the cultural factors.

### Piedmont Uplands-Blue Ridge Mountains Ceramic Area

Attention has already been called to the similar geographical spread of the Dan River and Grayson Series (Figure 6, 13), and it was noted that the former apparently entered the survey area from the southeast, the latter from the south. It is also noted that these series are associated with the Oak-Pine forests, the geologically oldest land mass composed of basic igneous rocks and the lateritic soils. From the geographical evidence they seem to have had little penetrating influence in the cultural exchanges of the Valley Province, and none in the Appalachian Highlands to the west. In bringing these two series together the first concern will be the temporal progression of temper changes through time. This will be followed by seriation of sites based on changes of ceramic types within each series.

The only excavated site in this region, Gy-10, is near the mouth of Little River from North Carolina into New River. The levels of this site have been combined into larger units for analyzing changes through time (their relationships are noted in the site description, pp. 13-15): Squares A, B, and C, 0-3 inches combined with Square D, 0-6 inches (sample 1); Squares A and C, 3-9 inches with Square D, 6-12 inches (sample 2); Squares A and C, 9-15 inches with Square D, 12-18 inches (sample 3); and Squares A and C, 15-21 inches with Square D, 18-24 inches (sample 4). The 21-27 inch, or bottom level of Square C is kept as a separate level, and Levels 2 and 3 of Square B have been treated as separate levels, representing the middle and lowest levels of that cut. The exact position of each combined and single level may be seen on Figures 7 and 8 to which have been added the sites with surface collections. The bars are percentages of each type of temper arranged in specific columns. The less common types of temper are on the right of the main sequences.

The bottom levels of Gy-10, layer 3 of Square B, and 21-27 inch level of Square C have respectively, 93.2 percent and 91.3 percent of crushed igneous stone, and 5.9 percent and 8.4 percent of sand, respectively. Gy-10, Sample 1 shows that crushed igneous stone had decreased to 83.3 percent and sand had increased to 16.7 percent. The only other type of temper is steatite, and this has an irregular trend but increases from 1.0 percent at the bottom to 2.8 percent in Sample 2.

After these percentages were recorded for Gy-10, the sites with surface collections were interdigitated into the graph to continue the trends already established, i.e. decreasing percentages of crushed igneous rock and increasing percentages of sand. The overall

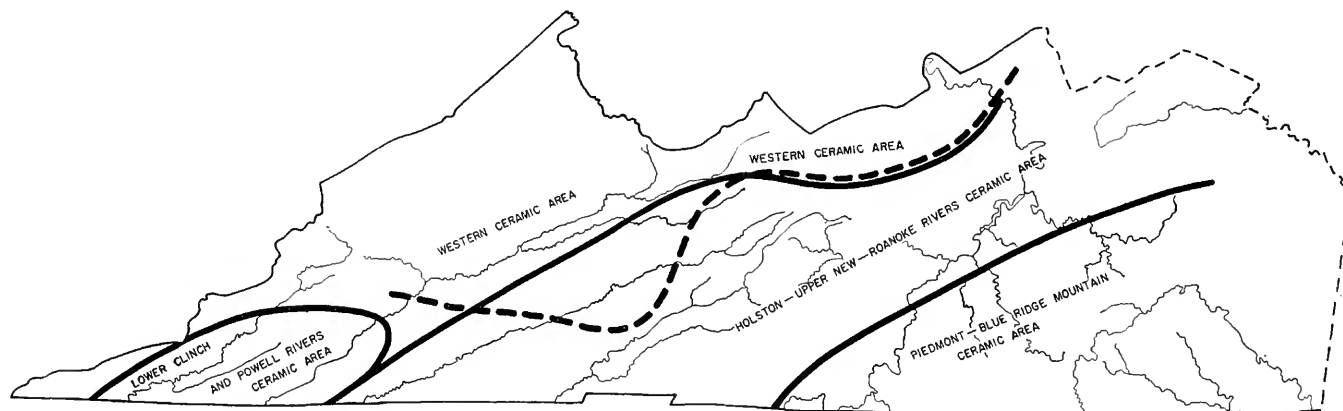


FIGURE 32.—Ceramic Areas. Heavy dashed line shows the eastern limit of the Western Ceramic Area.

result is a progressive change from use of crushed igneous stone to sand, the former absent at the top of the graph, and the latter the only type of temper in use, namely at Sites Pk-4, He-1, He-4, and Pk-10.

Two discontinuities in the gradual trend of increasing and decreasing percentages are between Sites St-3, Gy-6, and Gy-15, St-1. From and including Site St-1 to the top of the graph all sites (see Figure 8), excepting Fd-2, are located in the Piedmont. Below this point, with the exception of St-3, the four sites are west of the Blue Ridge Mountains. Since St-1 with 28 percent crushed igneous rock and 72 percent sand temper, and site St-3, with 71 percent crushed igneous rock and 29 percent sand are both located in the Piedmont, and split in their relationships between sites in the two geographical areas, it suggests that sites exist to the south of the survey area in North Carolina which would bridge these gaps in time and space. Site Fd-2 is in the upper part of the chart, and the fact that it lies on the western side of the Blue Ridge Mountains, indicates there are other sites with close ties to the Piedmont in this transmontane region. These two apparent discrepancies help to tie the Piedmont Uplands Blue Ridge Mountains Ceramic Area together, and bridge the two gaps mentioned above.

Trends in the percentages of other tempers (limestone, steatite, and shell) are not pronounced but their clustered positions in the progressive changes between the two major tempers suggest general temporal and areal relationships. Sites Gy-10, Gy-1, and Gy-6 with steatite temper all fall into the lower half of the graph and relate to the western side of the Blue Ridge, not the Piedmont. Contrariwise all sites with shell temper are in the upper segment of the chart and relate to the Piedmont exclusively. The suggestion here is that steatite tempering is older than shell, and the two are disassociated geographically. Sites with limestone temper cluster irregularly in the upper part of the graph. The lowest site in the sequence with this temper is Gy-1, which is not only on the western side of the Blue Ridge, but is also associated with steatite temper. The remainder of the sites are east of the Blue Ridge and in the same relative position as those with shell temper. One may suspect from this tentative evidence that limestone temper may be intermediate between earlier steatite tempering and later shell tempering in this ceramic area.

Four sites were omitted from Figure 8. Sites Gy-8 and Gy-18 with only 12 sherds, and with four and three types of temper, respectively, gave distorted percentages due to the sampling. (Gy-8: 50.2 percent crushed igneous stone, 16.3 percent sand, 16.3 percent limestone, 16.3 percent steatite; Gy-18: 33.3 percent crushed igneous rock; 58.3 percent sand; 8.3 percent

shell). Site Pk-4 with 12 sherds, however, was accepted since all the sherds are sand temper. Site Fd-1 with 58.8 percent limestone, 18.1 percent crushed igneous rock, and 22.1 percent sand temper is intermediate between the ceramic area to the west, next to be described, and this area. Site Pk-8 in the Piedmont with 66.0 percent sand temper, 30.5 percent shell, and 3.5 percent limestone is anomalous and was rejected because of the unusual proportions of tempering.

Seriation by temper is tantamount to seriation by series. However, since surface markings are variables which may be independent of temper, it is vital to see if the sites hold their temporal positions when the types are related to the temper studies. To do this the analysis began with Site Gy-10 using the same combined and single levels described above and shown graphically on Figure 7. The percentages of each type in the several series were reduced to bars whose lengths represented the percentage occurrence of each type. After these had been properly arranged and the trends noted, similar bars were formed for all the sites and fitted into the trends developed by the excavated site.

For Gy-10 the following trends were found: Grayson Net and Knot Roughened increased from 13.8 to 35.7 percent, and at the same time, Grayson Plain diminished from 25.4 to 19.0 percent. Grayson Checked Stamped, although irregular, diminished from 17.7 to 1.1 percent. Other changes within the Grayson Series, that is, fabric marked, scraped and cordmarked, were irregular. While these changes were taking place in the Grayson Series, Dan River Net Impressed increased from 2.9 to 9.5 percent, and there was a gradual increase in Dan River Plain from 1.9 to 2.4 percent. Dan River Cordmarked showed no trends. The Smyth Series was found in the middle levels of the excavation.

With these trends as guides, the remaining sites were added to the seriation as stated above. This resulted in rearranging sites in the temper graph, but in general they held their position fairly well. For example, Site Gy-9, placed above the excavated levels of Gy-10, was dropped to the bottom of the seriation, and Site Gy-1 fell to the middle levels of Gy-10, but held its relative position to Site Gy-9. In the temper graph the top six sites have 99 to 100 percent sand temper, thus apparently closely allied in time, and certainly the four with 100 percent sand have been arbitrarily arranged, namely Pk-10, He-4, He-1, Pk-4. The only site in this cluster to change markedly from its temper-determined position is He-4, which drops to midway of the seriation graph (Figures 7 and 8).

A single gap is in the seriation graph as opposed to two on the temper graph. Detailed examination of the

circumstances for this gap shows that the causes are the same as have already been discussed regarding the two gaps in the temper chart, and will not be repeated here. Note that all Grayson County sites are located below the gap and are accompanied by Site St-3, while St-1 is above the gap, a condition which also parallels the study of temper.

The series with the longest duration is Dan River. Dan River Net Impressed begins with a popularity of 6.5 and 2.9 percent at the bottom, and increases steadily until at Pk-2, the most recent site, its popularity is 82.7 percent. It will be noticed that at the gap there is an abrupt jump from 28.8 percent at Gy-6 to 35 percent at Pk-6. Dan River Plain shows this abrupt jump even more clearly. At the bottom of the seriation its popularity is 6.5 and 1.9 percent and increases somewhat irregularly to 11.8 percent at Site Gy-6. Following upwards through time, at Site Pk-6 it is 30.4 percent and maintains this popularity for half the remainder of the graph before it fades to 14.3 percent at the top.

Dan River Corncob Impressed, as a form of treating the exteriors of pots, is known to be of very late origin, for which see Coe's discussion (1952) regarding the Dan River Series. This type was found only in small quantity, and on the two most recent sites, Pk-2 with 0.5 percent and Pk-10 with 0.8 percent. Dan River Cordmarked has only minor changes through time and at most sites varies between 1.0 and 5.0 percent. Dan River Stamped occurs only in the upper half of the graph, at Sites Fd-2, He-3, and He-4, and it too is a late type of exterior treatment.

Grayson Series is most popular in the lower segment of the graph and occurs sporadically in small amounts above the time gap. Grayson Net and Knot Roughened begins with 16.1 and 13.8 percent, increases steadily to 38.0 percent at site Gy-15 and diminishes on the next two sites to 27.2 percent. At Site Pk-6 this type has dropped in popularity to 4.3 percent, indicating again the need for more sites to bridge the gap. From here to the top of the graph it has an irregular and minor place in the ceramic changes through time. Grayson Plain begins with 39.0 and 25.4 percent and steadily diminishes until, at site Gy-6, it is 11.8 percent. In the upper segment of the chart it, too, is irregular in occurrence and of minor importance. Grayson Cordmarked begins at the bottom of the graph with 19.0 and 10.8 percent, then drops steadily in popularity to only 3.4 percent at Site Gy-6. Above the gap there are only two sites which show merely traces of Grayson Cordmarked, Pk-3 with 0.4 percent and Pk-9 with 0.7 percent.

Grayson Scraped is limited entirely to the lower segment of the graph in small quantities, up to 7.1 percent, and appears to be a local and early type

of pottery. It is found only on Grayson County sites, but, of course, may have wider distribution. Grayson Fabric Marked has its greatest occurrence in the lower part of the graph, is extremely erratic in appearance, suggesting that there are typological difficulties in separating this type from Grayson Net and Knot Roughened. Grayson Checked Stamped is only found at Site Gy-10. Its stratigraphic level of greatest occurrence is Square B, Level 3, with 17.7 percent and hence is a type which marks the oldest period in the sequence.

Smyth, the steatite-tempered series, remains in the earliest section of the seriation graph (Figure 8) as it did in the temper study. If more sites were found which had this ware, the trends on the graph, that is increase through time of both Net and Knot Roughened and Plain might have meaning. As found here it is only suggestive.

No trends were indicated in the Radford and New River Series types due to the limited number of sherds for analysis. These series types however, do hold the same general position on the seriation graph as on the temper graph.

A point not yet discussed is the possible route by which Radford and New River pottery crossed the Blue Ridge Mountains from west to east, and how Dan River pottery moved in the opposite direction. Site Fd-1 on Simmons Branch very near Little River in Floyd County has 58.8 percent Radford, 22.1 percent Dan River and 18.1 percent Grayson Series. These percentages contrast strongly with those at Site Fd-2, which has 92.6 percent Dan River, 7.4 percent Grayson and no Radford Series pottery. Yet these sites are no more than 2.5 miles apart. Site Fd-1 shares traits with both sides of the Blue Ridge, and Site Fd-2 has its closest ties with the Piedmont; both, however, are on tributaries of Little River which rise in the Blue Ridge Mountains. On the eastern side of the mountain, sites with Radford Series pottery, Pk-8, Pk-20, Pk-17, and Pk-9, are all on the North and South Mayo Rivers and have their origin adjacent to the headwaters of Little River. Sites with New River Series pottery occur along these two Mayo Rivers, Pk-2, Pk-9, Pk-3, Pk-17, He-3, Pk-21, Pk-20, and Pk-8, as well as at Site He-2 on Smith River, which has its source east of Little River. No sites with these wares were found on Dan River which also has its origin near those of the Mayo and Smith Rivers, but the Dan River flows south before it turns to the east. The distribution of sites and the geographic locations of these streams on opposite sides of the Blue Ridge Mountains suggest a route across the mountain near the point where the present day political boundaries of Franklin, Henry, and Patrick Counties meet.



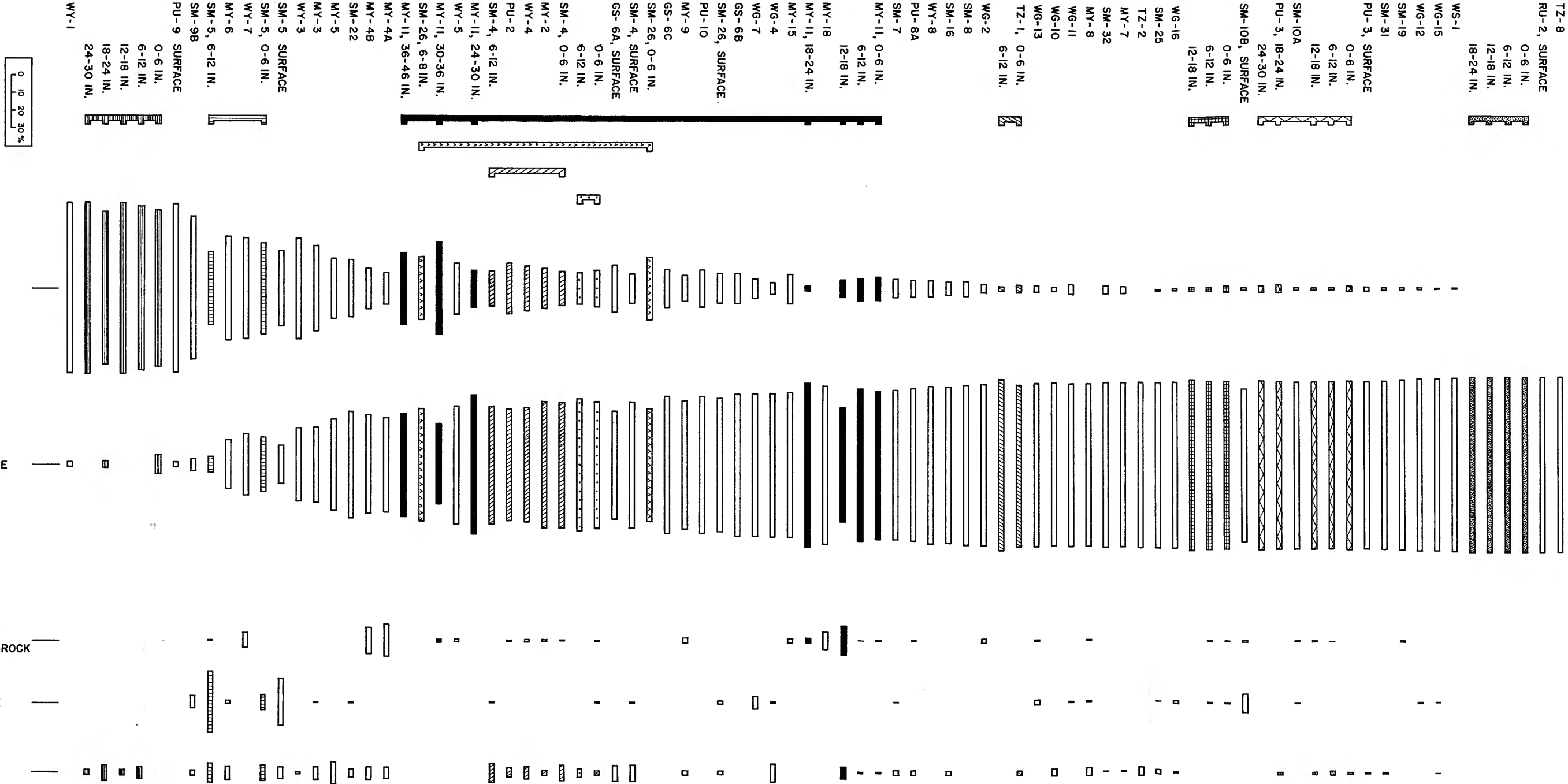


Figure 33.—Seriation of temper in the Holston-Upper New-Roanoke Rivers Ceramic Area.



### Holston-Upper New-Roanoke Rivers Ceramic Area

The largest group of sites in the survey represent this ceramic area on a basis of common geographic distribution correlated with specific attributes of pottery, discussed below. The sites lie in a southwest-northeast band through the middle of the surveyed area (Figure 32). The band is associated with the Forks of the Holston, the upper or downstream part of New River within the survey area, and the several sites on Roanoke River. There is a partial overlap with the Western Ceramic Area, delineated by sites with high association of shell and limestone tempering to be examined later. The major types of tempering are sand with 97.2 percent or less and limestone with 100 percent or less. These two tempers represent the Wythe and Radford Series since neither Dan River nor Lee Series with sand temper are involved. Of equal importance are the percentages of shell, constituting 13.2 percent or less, crushed igneous rock with 18.4 percent or less, and steatite with 35.4 percent or less.

A graph (Figure 33) has been arranged showing decreasing percentages of sand and increasing percentages of limestone. To do this the excavated sites were arranged first, keeping levels in proper order as found in the ground. The surface sites were then interdigitated. Excavated levels are marked on the left of the graph by a vertical line with short laterals.

The upper part of the graph represents the most recent sites, the bottom the oldest, and the entire graph is a calendar of major change from sand to limestone tempering through time. If Ru-2 at the top and Pu-9 at the bottom had been the only excavated sites it would have been impossible to say which was older or which younger. An intermediate site, My-11, with nearly 4 feet of midden provided sufficient range of tempering to establish the temporal sequence. In the 0-6 inch level of Site My-11 there is 84.5 percent limestone, 13.7 percent sand, 0.2 percent crushed igneous rock and 1.6 percent shell. In the lowest level, 36-46 inches, are found 59 percent limestone, 41 percent sand and no crushed igneous rock or shell.

The progressive changes from predominantly sand to predominantly limestone are not entirely smooth, especially in the older section. This partly is due to the large proportions of crushed igneous rock and steatite mixed with the deposits, a condition not found in the upper part. For example, the pottery samples from Site Sm-5, with 26.5, 8.6, and 35.4 percent steatite temper, and 7.3, 8.6, and 11.8 percent shell, indicate a less homogenous site than most others. It is also due to a deficiency of a larger number of yet undiscovered sites which belong here. If there had been more sites in this period the abrupt drop in

percentage of sand temper from 83.1 percent at Site Sm-9B to 43.4 percent at Site Sm-5, Level 6-12 inches and an increase in limestone from 7.0 percent at Sm-9B to 30.6 percent at Sm-5, Level 0-6 inches would have been smoothed out.

Crushed igneous rock, steatite, and shell tempering are erratic from site to site when compared with the steady trends in sand and limestone. The small amounts of shell in the ceramic area contrast strongly with the large amounts in the next two ceramic areas to be described. The limited amounts of crushed igneous rock, associated here with high percentages of limestone, remove sites with these two associations out of the Piedmont Uplands-Blue Ridge Mountain Ceramic Area. Steatite temper has its highest occurrence in this Holston-Upper New-Roanoke Rivers Ceramic Area and, as has been shown by its geographic distribution (Figure 26), relates mainly to this area.

When the sites that have the highest percentages of minor tempers are compared to the Piedmont Uplands-Blue Ridge Mountain Ceramic Area, various correlations can be made. For example, at Sites Sm-5 surface with 26.5 percent; Sm-5, 0-6 inches with 8.6 percent; Sm-5, 6-12 inches with 35.4 percent; Wg-7 with 7.6 percent; and Sm-9B with 7.0 percent, which represent the ceramic area under discussion, the largest percentages of steatite are found in the lower half of Figure 33, and also in the lower part of Figure 8. Associated with earlier levels on both Figures 8 and 33 are sites with crushed igneous rock.

Temper is but one aspect of a pottery series. The problem now is to determine the relationships of the various pottery series and changes in surface treatment which relate to them. Since the greatest number of sites relate the sand-tempered Wythe Series to the limestone-tempered Radford Series, the seriation will begin with this relationship. Further, as suggested by the temper graph, the probabilities were that Wythe had developed earlier than Radford.

The seriation was begun by examining the relationships of types within series from four excavated sites having depths of 24 inches or more: Pu-9, My-11, Pu-3, and Ru-2. At the lowest level of Site Pu-9, Wythe Net and Knot Roughened is 90 percent, and there is 7.0 percent Wythe Plain along with 3.0 percent New River Plain. At the surface of this 30-inch deep excavation Wythe Net and Knot Roughened drops to 70.2 percent, Wythe Plain increases to 13.8 percent, and at the surface Wythe Cordmarked is 3.7 percent. Radford, on the other hand is found in the top level only with Knot Roughened and Net Impressed, and Plain, both at 3.7 percent. New River is present only in the upper levels of Site My-11. Without discussing all the changes, which may be seen on the seriation graph (Figure 28), all types within the Wythe Series

continued to decline while Radford Knot Roughened and Net Impressed blossoms and declines, Radford Cordmarked declines, and Radford Plain increases in popularity. In all four sites, Grayson Series pottery is most consistently represented, and New River is found only in the upper 18 inches.

The graph for Pu-3, shows that the Wythe Series has declined to very small percentages in all types, not more than 2.0 percent, while the changes within the Radford Series overlaps the changes taking place at My-11. Specifically, at Level 12 to 18 inches of Pu-3 there is 77.5 percent Radford Knot Roughened and Net Impressed, 2.3 percent Cordmarked, and 12.8 percent Plain. New River and Grayson Series have very limited representation, not more than 1.8 percent for any type of New River or 0.7 percent for Grayson.

Ru-2 has 100 percent Radford Series pottery, excepting 1.3 percent unclassified sand temper at the 0 to 6-inch level. In the lowest level, 18 to 24 inches, Radford Knot Roughened and Net Impressed is 48.7 percent, Cordmarked 18.6 percent, and Plain 28.0 percent. In comparison with Site Pu-3 this represents a decline in Knot Roughened and Net Impressed and an increase in both Cordmarked and Plain. Lack of the Wythe Series, and the changes in the types, indicate that it is later in time than the previous three sites and is so positioned in graphing the excavated sites.

The final seriation (Figure 27) based on the excavated levels with surface material interdigitated, represents 85 collections. It shows these major changes through time: Wythe Net and Knot Roughened, in the lowest eight bars, is not less than 70.5 percent, but above this point fades progressively to the middle of the sequence, after which it is either absent or 8.9 percent and less. Wythe Cordmarked is most strongly developed in the lower third of the graph, and then only in small percentages, that is 7.6 percent at Site My-4A. Wythe Plain develops from 13.4 percent at the bottom to 19.0 percent at My-6 after Wythe Net and Knot Roughened has sharply diminished. The remaining types within the Wythe Series show no marked trends, although Wythe Fabric Impressed clearly belongs the lower part of the graph.

Simultaneously in the sequence, Radford Knot Roughened and Net Impressed, after the strong showing of Wythe Net and Knot Roughened, gradually increases toward the middle of the sequence to about 70 percent, and then gradually declines to about 37.7 percent at Ru-2S at the top. Radford Cordmarked is no greater than 13.5 percent as found at Site My-4A in the lower three-fourths of the sequence, but in the upper fourth increases to 39.2 percent at Site Ws-1, after which it again decreases to its previous level of occurrence. Radford Plain has a relatively steady

trend to near the top of the graph where it becomes more pronounced as both Radford Knot Roughened and Net Impressed and Radford Cordmarked decline. Radford Simple Stamped, with less than 1.3 percent at any point below the upper fourth of the graph, increases to 2.0 percent and is represented on seven sites at this level, but disappears at the top.

Although less consistently represented than either the Wythe or Radford Series, the types within the New River Series have their greatest development in the lower half of the graph. New River Knot Roughened and Net Impressed is never greater than 8.0 percent. New River Plain is 9.5 percent at Site Pu-9.

Both Grayson and Smyth Series are very erratic from site to site, and the major types fall into the lower half of the graph, a fact indicated by the temper study.

Pu-8B was eliminated from the sequence. The pottery is distributed between New River Series with 51.5 percent, Wythe with 41.5 percent, and Radford with 7.0 percent. The high percentage for the New River Series indicates that it falls in the Western Ceramic Area, to be described later. However, in this ceramic area there is a high association with Radford and very little Wythe, making it an anomalous site in both ceramic areas. Wg-2 with 36 sherds was also eliminated because 28 sherds or 78 percent of the sample was Radford Cordmarked, undoubtedly representing a biased collection.

### Lower Clinch and Powell Rivers Ceramic Area

This area at the tip of southwest Virginia, is associated with these two rivers before they exit from the state. The geographical position of these sites is accompanied by specific ceramic developments unique in the whole survey area. It differs from the Piedmont Uplands-Blue Ridge Mountains Ceramic Area in that both Grayson and Dan River Series are totally absent, and from the Holston-Upper New-Roanoke Rivers Ceramic Area in that both Radford and Wythe Series are minor occurrences on the sites. The New River Series, which is found as traces in the latter area, assumes a major role, and furthermore is accompanied by the Lee Series. As we shall see this area contrasts with sites in the Western Ceramic Area due to the association of New River with the Radford Series and an absence of Lee.

Unfortunately, this ceramic area is represented by only three sites, Le-17A, Le-14, and Sc-9, a factor which greatly obscures the complete ceramic trends. Le-17A was excavated, and the trends set by the levels in this 5-foot square have been used to order the ceramic changes through time.

As in the other ceramic areas the study of this one started with an evaluation of the changes in the

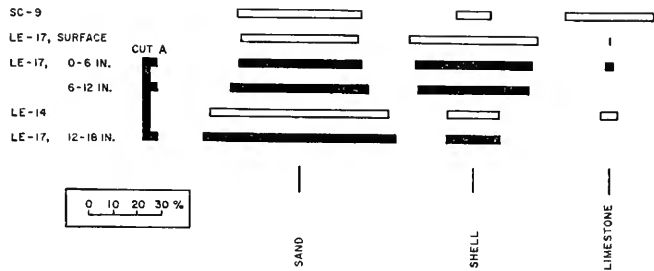


FIGURE 34.—Seriation of temper in the Lower Clinch and Powell Rivers Ceramic Area.

temper (Figure 34), using the excavated levels of Site Le-17A as a guide. It was found that the bottom level, which was 12 to 18 inches deep had 77.5 percent sand temper and 22.0 percent shell temper. There was a progressive decrease in the former and increase in the latter so that at the surface there was 47.3 percent sand and 52.2 percent shell. The other two sites were added to the graph as they fitted. Site Sc-9 fits best at the top of the graph although the percentages are distorted by the large percentage of limestone tempering, 36.1 percent, and by the fact that 5.6 percent of the sand temper belongs to an unclassified sand-tempered series.

When the ceramics are seriated on a basis of percentage changes of types within the various series the levels of excavation and sites retain their relative positions in this graph (Figure 35).

In the bottom level of Le-17A, 12 to 18 inches, Lee Linear Stamped makes up 66.5 percent of the assemblage with the remainder distributed as follows: Lee Plain 11 percent, New River Knot Roughened and Net Impressed 11 percent, New River Cord-

marked 5.5 percent, and New River Plain 5.5 percent. Through time Lee Linear Stamped declines to 30.5 percent at Site Sc-9; Lee Plain is 11 percent in the 12 to 18-inch level of Le-17A, and present at Le-14 with 18 percent, and declines to 5.6 percent at the surface level of Le-17A. Lee Simple Stamped is represented (Figure 35) with 4 percent at Le-14. While these changes are taking place within the Lee Series, New River Plain increases from 5.5 to 17.5 percent at Le-17A. There is a similar increasing trend in New River Knot Roughened and Net Impressed from 11 to 18 percent at Le-17A. New River Cordmarked is more popular in the 6 to 12-inch level of Le-17A and at Le-14 than it is higher or lower in the graph.

Lee Checked Stamped and any type of Radford are of minor occurrence in the lower part of the graph; that is, on the Lee County sites. It is only at Sc-9 that Radford Series pottery is present in any quantity, and this site fits at the top of the graph. Here Radford Knot Roughened and Net Impressed is 13.9 percent, Radford Cordmarked is 2.7, and Radford Plain 8.4 percent.

#### Western Ceramic Area

Twelve sites remain to be accounted for which are located in two clusters in the western part of the survey area. Sites Gs-1, Gs-5, and Gs-8 are located in the lower New River basin; Sites Ru-1, Ru-3A, Ru-3B, Ru-7, Ru-9, Ru-11, and Ru-13 are between the Clinch and North Fork of the Holston, Site Wg-1 is between the North and Middle Forks of the Holston; and Site Tz-7 is on the Clinch River. They are characterized by high percentage association of New River, 21.3 to

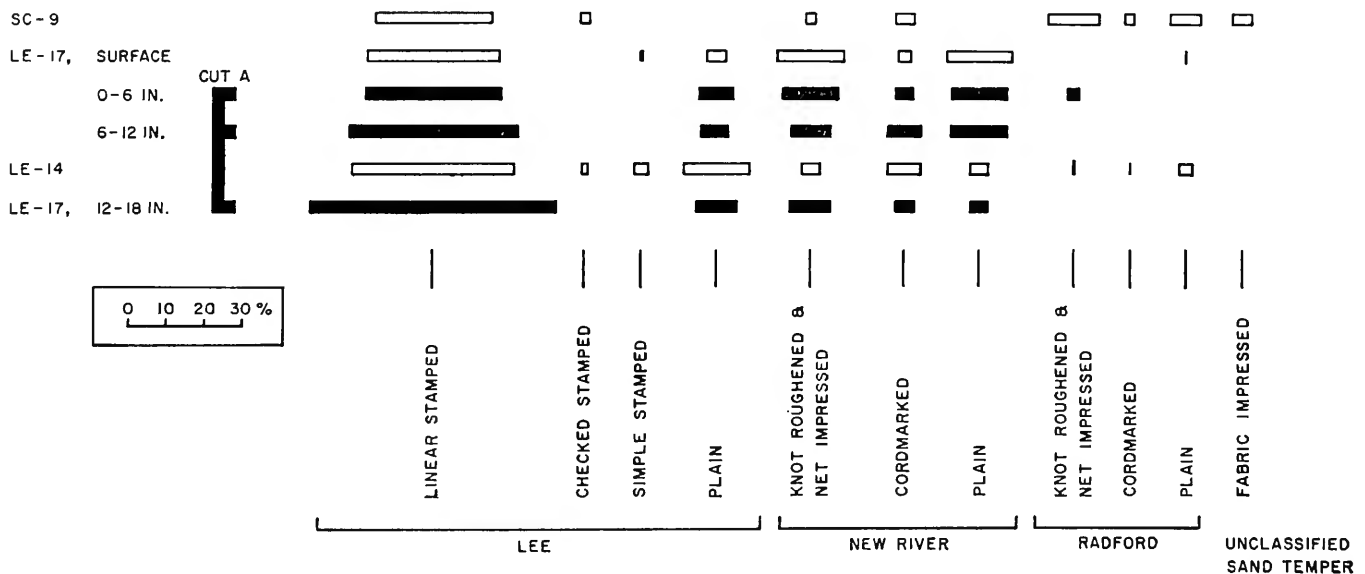


FIGURE 35.—Seriation of pottery types in the Lower Clinch and Powell Rivers Ceramic Area.

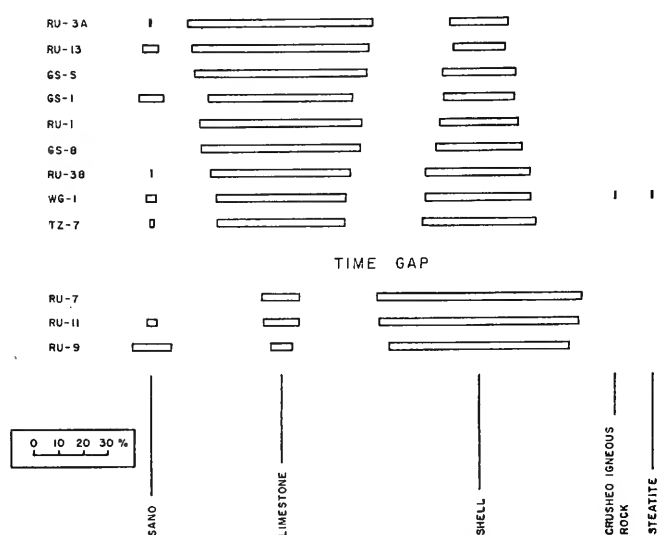


FIGURE 36.—Seriation of temper in the Western Ceramic Area

83.2 percent, and Radford 9.4 to 75 percent, pottery, and very small quantities of Wythe, 16.4 percent or less. With these associations they are set off from the Holston-Upper New-Roanoke Rivers Ceramic Area, and the lack of any association with Lee Series differentiates them from the Lower Clinch-Powell Rivers Ceramic Area. When the percentage distributions of both tempering materials and types within series were determined (Figures 36, 37) these 12 sites might have been placed in the Holston-Upper New-Roanoke Rivers Ceramic Area. They would fall, however, in the lower part of the seriation graph for both temper and types within series (Figures 36, 37) due to the distributions of tempering and types, but cannot be placed here because of the very limited occurrence of Wythe Series and the large amounts of New River.

Because of the large quantities of Radford series in both areas, the Western Ceramic Area has its closest affiliations with the Holston-Upper New-Roanoke Rivers Ceramic Area, and the sites overlap in geographic distribution. The temper study of the latter area (Figure 33) shows that as limestone increased through time, shell decreased. Since there are no excavated sites among the twelve to order the changes through time, and after careful consideration of many possible alternatives, the sites were arranged in parallel development with the Holston-Upper New-Roanoke Rivers Ceramic Area. The temper study (Figure 36) shows that shell ranged from 73.4 percent at Site Ru-9 in the lower part of the graph to 24.2 percent at Ru-3A at the top. Limestone at these two ends of the graph has increased from 9.4 to 75 percent, respectively. It is apparent that two smooth curves would have developed had there been more sites to bridge the gap between sites Ru-7 and Tz-7. Sand as a temper is erratic and does not

occur in greater amounts than 16.4 percent, of which 6.3 percent is unclassified by type at Site Ru-9. Both crushed igneous rock and steatite tempering occur in very minor quantities, and do not influence the sequence.

Listing the sites in the same order as they occur on the temper graph, the types within series were examined and are shown on Figure 37. Radford Knot Roughened and Net Impressed increases from 4.8 percent at Ru-7 below the time gap to 37.6 percent on the next site above it; that is, Site Tz-7. It becomes more popular through time to the top of the graph, 43 percent at Site Ru-3A, 50.4 percent at Site Ru-13. Simultaneously, New River Knot Roughened and Net Impressed increases below the gap from 12.5 percent at Ru-9 to 58.0 percent at Ru-7. Above the gap New River Knot Roughened and Net Impressed declines steadily from 31.8 percent at Tz-7 to 12.5 percent at Ru-3A at the top of the graph. Radford Plain has a steady increase, without appreciable change across the gap from 4.0 percent at Ru-9 to 16.0 percent at Ru-3A. On the other hand New River Plain has an extremely high occurrence on the two lowest sites, 59.3 percent at Ru-9 and 48.8 percent at Ru-11, above which it holds a fluctuating but relatively constant level at about 5.9 percent. Radford Cordmarked increases, without abrupt change at the gap, from 2.4 to 4.2 percent, and continues to grow more popular through time. In contrast New River Cordmarked decreases progressively from 9.0 to 4.6 percent without any abrupt changes across the time gap. Also the other types within both series are too erratic from site to site to form any definite trends.

Comparing these trends with those in the Holston-Upper New-Roanoke Rivers Ceramic Area the changes are similar in both areas, although much attenuated in the Holston-Upper New-Roanoke Rivers Ceramic Area due to the small and inconstant quantities of New River Series Pottery.

### Temporal Considerations Within the Various Ceramic Areas

**HOLSTON-UPPER NEW-ROANOKE RIVERS CERAMIC AREA.**—Solecki (1949, pp. 329-352) has discussed the history of the Appalachian Valley in southwest Virginia in detail. The historic evidence indicates the area was deserted by the Indians when settlers began to arrive around 1750. This fixes the most recent time at which ceramic changes could have taken place in the sequence shown by the seriation diagram (Figure 28). Since the exact date is not known when the Indians deserted the area, subtracting 25 to 50 years will place an upper limit of around 1725 to 1700.

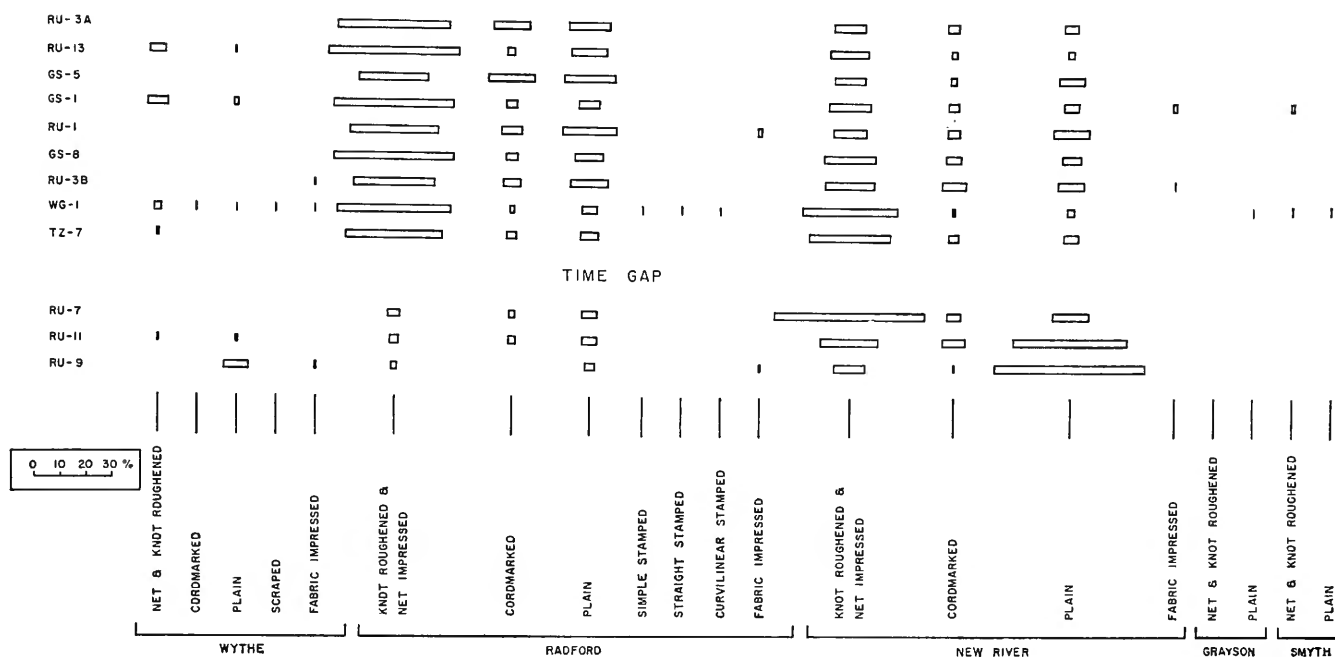


FIGURE 37.—Seriation of pottery types in the Western Ceramic Area.

From the data in the site descriptions and evidence of trade goods it is suggested that the upper third of the diagram, that is from Sm-8 to the top, is within the historic period, and after A.D. 1600. At Sm-8, on the Chilhowie High School grounds, European trade goods such as red and creamy tan glass beads, a trade ax, and bronze "ear plugs" are reliably reported. At Tz-8 glazed clay marbles were associated with a burial cairn, Radford Series pottery, and stone artifacts of undetermined date, making this evidence somewhat equivocal. At Tz-9, however, in a similar cairn but without pottery, there were found one and a half blue glass trade beads, 20 brass beads on a cotton string, a sheet of mica, and an amethyst crystal. The only other reports of mica associated with burials are from Wg-10 and Wg-11 (both in the upper third of the diagram) and at Wg-10, a burial was associated with the iron ax mentioned above. Reeves (1958) reports a kaolin pipe fragment from the village debris at Pu-10.

Additional evidence for recent dating of sites within the upper third of the seriation diagram is an association between the sites and shell gorgets with rattlesnake designs, some fenestrated, artifacts that are paraphernalia of the Southern Cult. All reports of these finds are from Wg-11, Sm-16, Sm-25, Sm-31, and Sm-8, all graphed in the upper third of the diagram. If Sears' (1964, pp. 278-9) date of A.D. 1400 for the beginning of the Late Mississippi period with its associated Southern Cult objects is accepted, then the upper third of the diagram is later than A.D. 1400. Thus, these two lines of evidence from different

sources suggest the upper third of the sequence (Figure 28) is no earlier than A.D. 1400, and most likely, is later than A.D. 1600.

An absolute date for the lower time limit of the seriation diagram sequence is more difficult to establish. Yarnell (see p. 29), from analysis of the corn found at Pu-9, states, "This is not the type of corn which occurs latest in prehistoric sites, but I will be surprised if it dates before A.D. 1000." Furthermore, if, as suggested, the Grayson Series pottery is associated with Coe's Uwharrie Focus (1952, p. 307) with an approximate date of A.D. 1200, it will be noted that when this series spills over into the Holston-Upper New-Roanoke Rivers Ceramic Area from the Piedmont Uplands-Blue Ridge Mountains Ceramic Area to the east the major occurrence is in the lower half of the seriation diagram. In the latter ceramic area the Grayson Series seriates below the Dan River Series, a series that does not spill over into the former ceramic area, and is dated around A.D. 1625-1675. It may be suggested that the sites at the lower part of the diagram are later than A.D. 1000, and probably later than A.D. 1200.

There are three carbon-14 dates in the ceramic area. The carbon sample from Pu-9 at the bottom of the diagram was directly associated with the charred corn Yarnell examined. It was found in a truncated pit as a concentration and as scattered pieces in the 12 to 18 inch level. This carbon sample is dated A.D.  $1330 \pm 120$  years (SI-130). The second sample was from charcoal found in the southwest corner of a refilled storage pit at Pu-3, Level 12-24 inches. This charcoal was also

from a concentration as well as scattered pieces at this level. The pottery from the cut on this site is plotted near the middle of the seriation diagram (Figure 27). The date returned was A.D.  $1600 \pm 200$  years (SI-129). Since the site was not associated with European trade goods and the margin of error of these two dates was so great they might overlap, that is A.D. 1450 versus A.D. 1400, a third sample was submitted. This came from My-11, Level 18-24 inches and was associated with rocks forming a hearth and the major pottery series, namely Radford and Wythe, which are seriated just below the pottery samples from Pu-3, Levels 12-18 inches and 18-24 inches. The date returned on this third sample was A.D.  $1250 \pm 120$  years (SI-329). The complicating factor with the carbon sample from My-11 is that at the levels from which it came there is a small amount of Grayson Series pottery, which as noted above is guess dated around A.D. 1200. It is entirely possible that the carbon-14 date is from a hearth left by the makers of the Grayson Series pottery.

The various lines of evidence for dating the ceramic sequence in the Holston-Upper New-Roanoke Rivers Ceramic Area has been summarized in Table A. It appears that the carbon-14 date of A.D.  $1600 \pm 200$  years for the middle of the graph is too late and the

date of A.D.  $1250 \pm 120$  years is too early, probably dating the Grayson Series intrusion at My-11. The A.D.  $1330 \pm 120$  years for Pu-9 falls after the earliest suggested date from the corn sample but the C-14 date needs to be verified. On the whole it can be said the table represents the changes in the pottery of the Holston-Upper New-Roanoke Rivers Ceramic Area during the Lake Woodland and into the Historic Periods.

**PIEDMONT UPLANDS-BLUE RIDGE MOUNTAINS CERAMIC AREA.**—As already noted, Coe and Lewis (1952) proposed that the Dan River Series pottery was "the ceramic complex of the Sara Indians in the Dan River area along the Virginia-North Carolina boundary between 1625 and 1675." They further noted that corncob roughening, "In all cases, . . . appears in the historic context." This temporal assignment fixes the upper part of the seriation diagram for this ceramic area (Figure 7). Here are found the highest percentages of Dan River Net Impressed pottery and the only evidence of corncob roughening. It cannot be determined from the survey data alone whether or not the ceramic refuse was left by the Sara Indians; therefore, no ethnic identity is suggested here.

Coe (1952, p. 307) implies that his Uwharrie Focus may be assigned an approximate date of about A.D. 1200. If this is accepted the lower part of the seriation diagram for this ceramic area may be tentatively dated from the large quantity of Grayson Series as earlier than the Historic Period, and possibly as early as A.D. 1200. As noted above in the discussion of the Holston-Upper New-Roanoke Rivers Ceramic Area there is some support for this date. The series is certainly earlier than the upper third of the graph that is post A.D. 1600, and the carbon-14 date from My-11, Level 18-24 inches, is associated with Grayson Series pottery and may reflect a date of A.D.  $1250 \pm 120$  years for this series.

**LOWER CLINCH-POWELL RIVERS CERAMIC AREA.**—The only carbon-14 date from this ceramic area is A.D.  $1210 \pm 120$  years (SI-131; Le-17B, Level 12-18 inches). Two cuts were made in the village represented by Le-17 and separated by 25 yards. Cut A produced sufficient ceramics for study and seriation (Figure 35), but did not produce enough charcoal for dating purposes. Cut B had a limited number of New River Series sherds and considerable charcoal. Since this series is associated with the numerous Lee Series sherds in Cut A it was believed worthwhile to obtain a date for Cut B charcoal in spite of the dearth of ceramics.

The reason behind this was that the ceramic material, both from the cuts and the surface (except for three sherds, 1 Wythe Series and 2 Radford

TABLE A.—*Dating in the Holston-Upper New-Roanoke Rivers Ceramic Area*

Relative position of sites on the seriation graph	Artifact evidence for the guess date	Guess date	Carbon-14 date
Upper third	Iron Ax at Wg-10 Kaloia pipe at Pu-10 Glazed clay marbles at Tz-8 (trade beads, bronze beads at Tz-9) Trade beads, iron ax, bronze "ear plugs" at Sm-8.	After A.D. 1600	—
	Southern Cult artifacts at Sm-16, Wg-11, Sm-25, Sm-31, Sm-8.	After A.D. 1400	—
Middle	Pu-3.	After A.D. 1200	A.D. $1600 \pm 200$
	Grayson Series pottery at My-11, 12-18 in, 18-24 in; My-4A; My-4B.		A.D. $1250 \pm 120$
Lowest	Corn	After A.D. 1000	A.D. $1330 \pm 120$



Series), were distributed between Lee and New River Series, giving an indication of homogeneity to the site. As noted earlier the type Lee Linear Stamped has been called "Pseudo-Iroquoian" in the southeastern United States. At the Chauga site in South Carolina there are two carbon-14 dates associated with this type, A.D.  $1070 \pm 50$  years (M-939) and A.D.  $1120 \pm 150$  years (M-933) (p. 58). Furthermore, Pohlemus and Pohlemus (1966) described a type called Cobb Island Complicated Stamped, which is similar to Lee Linear Stamped, and associated it with the early Mississippian Period. Combining these

data and the carbon-14 date from Le-17 it appears that the village is also of early Mississippian date.

WESTERN CERAMIC AREA.—There are no carbon-14 dates from this ceramic area. The high percentages of the New River Series, if identified as Mississippian from the cultural trait of shell tempering, suggest a time period later than A.D. 1000. In view of the date associated with this series at Le-17 (see above), sites at the lower part of the seriation graph (where the New River Series is represented in its highest percentages; Figure 37), are probably in the early Mississippian Period or around A.D. 1200.

# Projectile Points

Those projectile points found in the survey area that could be identified by named types are described. With each type description an attempt has been made to give some idea of their chronological position and their geographical distribution, both in adjoining regions and if applicable at more remote distances. In one instance enough samples existed and the characteristics were so distinctive that a new type and name was established (p. 90). The occurrence of each type is listed for each site at the end of the site's description. In this section the projectile points are described in alphabetical order.

## Bifurcated Base

PLATE 15 s-u

The blade edges of all points are either incurvate, excurvate or straight, with a few serrated, although this is not a prominent characteristic. The blade may be either isosceles or equilateral and is either flat or slightly biconvex in cross-section. The shoulders are small but prominent and usually come to a point. The base is formed by undercutting the blade and indenting the middle of the base 0.2 to 0.3 cm. One-half of the specimens have been slightly ground on the base.

Length: Average 2.6 cm; range 1.5-3.1 cm.

Width: Average 2.0 cm; range 1.5-2.4 cm.

Length of stem: Average 1.1 cm; range 0.9-1.5 cm.

Width of stem: Average 1.5 cm; range 1.2-1.8 cm.

Thickness: Average 0.4 cm; range 0.3-0.6 cm.

Material: Chert.

In the survey area the Bifurcated Base points are widespread, and in Virginia they occur all over the state (Bushnell, 1937, pls. 5, 18, 20; McCary, 1955 and 1963, type 2; Holland, 1955 type G, 1960). In the eastern United States there appears to be a number of types of which LeCroy (Kneberg, 1956) is one, and recently in West Virginia an older type has been proposed called St. Alban (Bettye Broyles,

Eastern States Archeological Federation, 1966), which may be of this generic association. It has been judged wiser, however, to present the data from the survey area in the above form rather than assigning definite names until a greater number of specimens have been found and more complete descriptions are available in order to define tighter categories.

## Big Sandy Sidenotched

PLATE 15l

These have been described by Kneberg (1956, p.25). The ones from the survey area have excurvate edges of the blade which, in cross section, are mildly biconvex. The bases may be either incurvate or straight. The sidenotches are relatively wide and deep producing a definite, generally rounded, shoulder. Flaking is done with the removal of broad free flakes, and fine retouch was present on only one point. Grinding of the base and notches occurs on all specimens.

Length: Average 3.5 cm; range 3.1-4.1 cm.

Width: Average 2.3 cm; range 1.8-2.5 cm.

Thickness: Average 0.7 cm; range 0.5-0.8 cm.

Length of stem: Average 1.2 cm; range 1.0-1.4 cm.

Width of base: Average 1.9 cm; range 1.5-2.5 cm.

Width at notches: Average 1.4 cm; range 1.0-1.7 cm.

Material: Majority chert; one rhyolite.

These occur at the Eva Site in western Tennessee where they are dated from 4000 to 3000 B.C. (Lewis and Lewis, 1961, p. 37). At the Stanfield Worley Bluff Shelter in Alabama they were found in the Dalton Zone (DeJarnette, Kurjack, and Cambron, 1962, p. 82) dating at approximately 7000 to 6000 B.C. These points appear to be identical with Faulkner Side Notched from the midwestern states where the temporal range is from 8000 to 3000 B.C. (Winters, 1963, p. 16). There are other named types to which they may be associated such as Otter Creek in New York (Ritchie, 1961,

p. 40) and Raddatz Sidenotched in Wisconsin (Wittry, 1959).

#### Bradley Spike

PLATE 16n

Kneberg (1956, p. 27) briefly describes and illustrates this unique point. A similar type occurs in the midwest known as Bradshaw Stemmed (Winters, 1963, fig. 5). A single specimen of this long point shows the removal of broad, free flakes. The edges of the blade are slightly excurvate, the shoulders are rounded and the cross-section diamond-shaped. The base is straight without grinding.

Length: 4.7 cm.

Width: 1.7 cm.

Length of stem: 1.1 cm.

Width of base: 1.2 cm.

Width of stem: 1.0 cm.

Thickness: 1.0 cm.

Material: Rhyolite.

Kneberg assigns the time period as Early Woodland, but Winters (personal communication) states that Bradshaw Stemmed may be Woodland in the midwest but this is still controversial.

#### Cache Diagonal Notched

PLATE 15m

A single specimen of this type was identified by Winters (personal communication). It is common in the Wabash Valley and has an Early Archaic provenience (Winters, 1963, p. 20, fig. 3 a-b). The sides are excurvate and cross-section biconvex. The shoulders are rounded and the notches generally are placed at an angle with the central axis of the blade. Basal grinding is characteristic of the base and notches, and on this specimen extends onto the shoulders. The base

is straight with angulated ends. Chipping is by percussion with the removal of broad flakes.

Length: 4.4 cm.

Width: 3.7 cm.

Stem length: 1.6 cm.

Width of base: 3.6 cm.

Thickness: 0.7 cm.

Material: Chert.

#### Clarksville Small Triangular

PLATE 17a-e

These are the smallest of all points found in southwestern Virginia. The shape is either isosceles or equilateral triangular. The chipping was by pressure and may be extremely fine and even. The edges are straight on most specimens but may vary slightly between incurvate and excurvate on a small minority. The bases also vary: the majority are excurvate, followed in frequency by incurvate, and with a minority straight.

Length: Average 1.8 cm; range 1.5–2.0 cm.

Width: Average 1.3 cm; range 1.0–1.4 cm.

Thickness: 0.3 cm; range 0.1–0.4 cm.

Material: Chert.

These are an extremely Late Woodland, even Historic, type of point that occurs all over the survey area. They have been reported from the Piedmont Uplands in Virginia (Holland, 1955) and are named after the type found at the Clarksville area near the Virginia-North Carolina border by Coe (1964, p. 112). Figure 38 shows the distribution of the triangular varieties.

#### Clovis

McCary's survey of Clovis points (1947, 1952 1965) includes eight from the present survey area

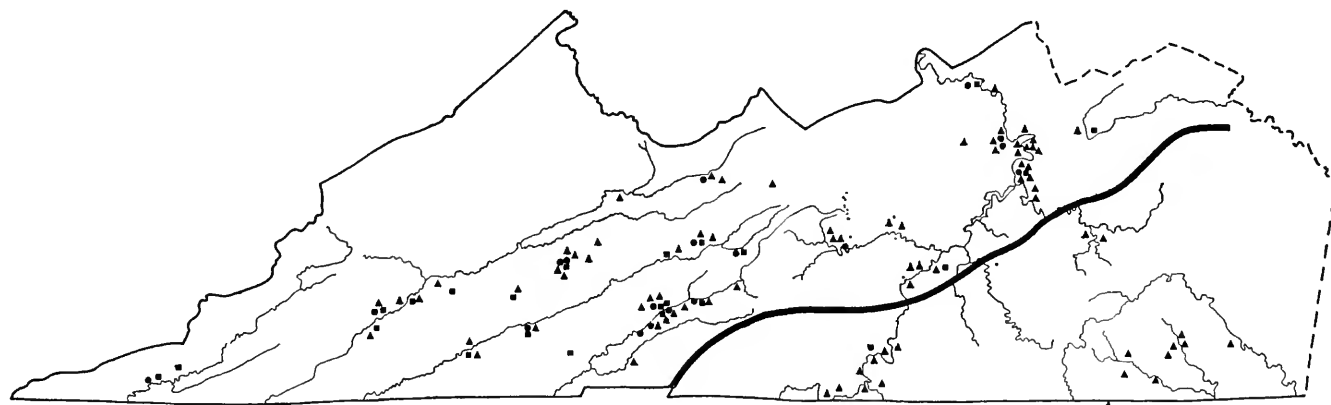


FIGURE 38.—Geographical distribution of triangular points. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east. Sites with Clarksville Small Triangular points, Madison Triangular Points and Levanna Triangular points (triangles), Dallas Triangular points (squares), and Hamilton Triangular points (circles).

one from Roanoke County, three from Smyth County, one from Buchanan County, two from Scott County and one from Giles County. Four others were seen in collections. Mr. Jeff Matthews of Galax, Virginia, had two, found either in Carroll or Grayson Counties (McCary, 1965, points 316–317). There was one in a collection from Smyth County in the Peabody Museum at Harvard, and one from Floyd County in a private collection. All of these points are of the generalized Clovis type, seven of which are of chert and one of crystal quartz.

Dallas Triangular  
PLATE 17 *p-t*

These are long triangular points, typically with excurve sides, but also with straight sides (Lewis and Kneberg, 1946, pl. 66D). In the survey area only 38 percent of the sides are excurve. The bases of the majority are straight but a few are excurve or incurvate. The cross-section is biconvex rather than flat with the removal of irregular sized flakes often measuring as long as half the width of the blade. There is some secondary retouch.

Length: Average 2.8 cm; range 2.0–4.0 cm.

Width: Average 1.4 cm; range 0.9–1.7 cm.

Thickness: Average 0.4 cm; range 0.3–1.0 cm.

Material: Chert.

These points were limited in distribution to the Appalachian Valley and Highland Provinces of Southwest Virginia. It is possible that a sampling error precluded finding them in the Blue Ridge Mountains and Piedmont Uplands. Lewis and Kneberg (op. cit., p. 11) suggest that these points represent a Middle Mississippi culture dating prior to A.D. 1540 (op. cit., p. 12) in Tennessee. Figure 38 shows the geographical distribution within the survey area.

Dalton  
PLATE 15a

This series of points is tentatively identified on the basis of two basal fragments of chert. The notched and ground bases are typical, but since the blades are missing no other comments are possible.

Guilford Lanceolate  
PLATE 15 *n-r*

Two groups of lanceolate points have been placed under this category. One is the typical Guilford Lanceolate as described by Coe (1964, p. 43, fig. 35) and the other with a blade similar to Guilford Lanceolate but with a rounded base (Plate 15 *q, r*).

A sample of 17 of the typical Guilford Lanceolate points (Plate 15 *n-p*) have these characteristics: the blade is lanceolate, with the edges typically excurve

but with a few straight; cross-sections range from planoconvex to biconvex, with the majority biconvex; the base is usually concave but a few are straight or mildly excurve.

Length: Average 5.6 cm; range 3.9–8.5 cm.

Width: Average 2.3 cm; range 1.8–3.0 cm.

Thickness: Average 1.0 cm; range 0.7–1.2 cm.

Material: Quartz, quartzite, and rhyolite, in order of preference.

They have been found in the Piedmont Uplands (Holland, 1955, type F) and northeast of the survey area in the Appalachian Valley (Holland, 1960, type F). Bushnell, as early as 1940 (pl. 3) found them at the Peaks of Otter in Bedford County, Virginia, and recently John Griffin (personal communication) found them in a stratified context at the same site. Their extension to the east takes in Coe's Gaston site in North Carolina (1964, fig. 105) and the Dismal Swamp in Virginia (McCary, 1963, type 4, pp. 44–45). Their northern extension in Virginia is only tentatively reported, but Bushnell (1937, pl. 5; 1935, pls. 6 and 20) illustrates them from the Rapahannock and Rapidan Rivers. It is worth mentioning their absence in the Wabash Valley of Illinois (Winters, personal communication), the Eva site in Tennessee (Lewis and Lewis, 1961), and the Stanfield Worley Bluff Shelter in Alabama (DeJarnette, Kurjack, and Cambron, 1962). Their age is about 4000 B.C., according to Coe (1964, p. 44).

The second group, consisting of 12 measurable points, have rounded bases (Plate 15 *q, r*) and isosceles triangular blades with the edges slightly excurve. There are usually no definite shoulders, but the blade arcs sharply toward the midline forming a rounded, excurve base which shows no evidence of grinding. The blade is biconvex.

Length: Average 3.7 cm; range 3.1–4.9 cm.

Width: Average 1.7 cm; range 1.1–2.5 cm.

Thickness: Average 0.7 cm; range 0.5–0.8 cm.

Material: Chert, rhyolite, quartz, and quartzite, in order of preference.

When plotted on a map by sites (Figure 39), the two groups have regional distributions that may or may not have cultural meaning in southwestern Virginia. The spread of typical Guilford Lanceolate points is limited to the New River basin to the west but continues northwards in the Appalachian Valley; however, it was not found on the Powell, Clinch, or Holston Rivers. In contrast, the rounded base group is found on these three rivers and eastwards to the western foot of the Blue Ridge Mountains, but was not found in the Piedmont Uplands, a factor that may have been a sampling error since the literature shows they are found in the Piedmont (Holland, 1955, type J) and Dismal Swamp (McCary, 1963,

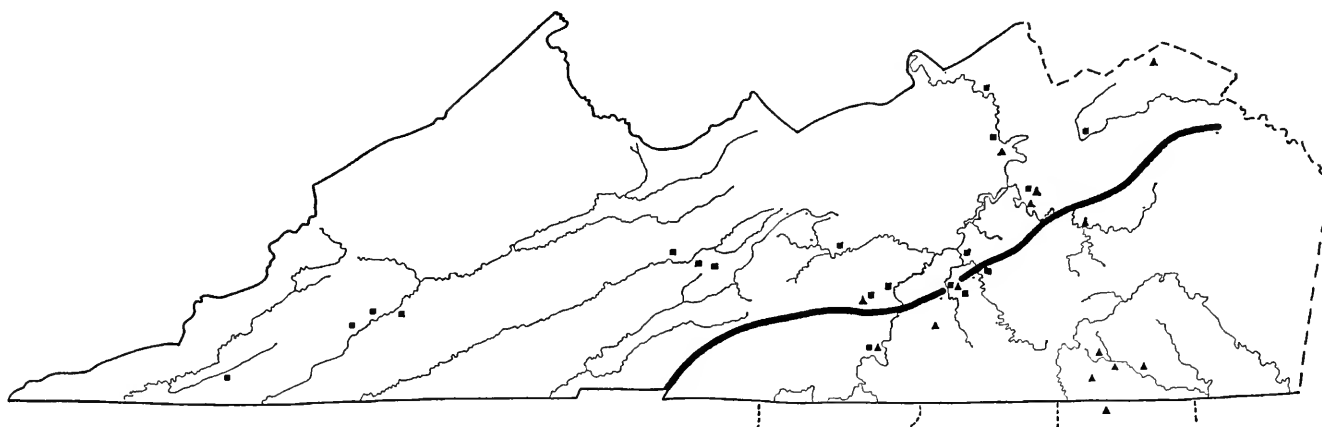


FIGURE 39.—Geographical distribution of typical Guilford Lanceolate points (triangles) and Guilford Lanceolate points with rounded bases (squares). Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east.

p. 44, type 6). They are also known to occur north-east of the survey area in the Appalachian Valley (Holland, 1960, type J.)

#### Hardaway Sidenotched

PLATE 15d

Four points having characteristics similar to Hardaway Sidenotched (Coe, 1964) showed these characteristics: the blades are equilateral or isosceles triangular in outline, with straight edges and no serration; notches are deep and the bases also are deeply incurvate and wider than the shoulders; bases and notches are ground heavily, and the bases thinned; cross-sections are planoconvex or biconvex.

Length: Average 3.4 cm; range 2.1–4.5 cm.  
Width: Average 2.1 cm; range 1.6–2.8 cm.  
Stem length: Average 1.3 cm; range 0.8–1.7 cm.  
Basal width: Average 1.9 cm; range 1.8–2.5 cm.  
Width across notches: Average 1.5 cm; range 1.4–1.7 cm.

Thickness: Average 0.5 cm; range 0.4–0.7 cm.

Material: Chert.

Associated with the Hardaway-Dalton type at the Hardaway Site in North Carolina was a sidenotched variety that Coe (1964, p. 64) speculates as developing after the Hardaway Blade and Hardaway-Dalton groups, and lasted longer than the other two. Cambron and Hulse (1964, A-46) say they have been referred to as the Corner Notched Dalton in the Tennessee Valley. At the Stanfield Worley Bluff Shelter in Alabama this type was associated with the Dalton Zone and the carbon-14 dates for the zone were  $7680 \pm 450$  B.C. (M-1152) and  $6960 \pm 400$  B.C. (M-1153) (DeJarnette, Kurjack, and Cambron, 1962, pp. 85–87). A similar temporal assignment is given by Coe (1964, p. 121) for the Piedmont and would apply equally well to the Virginia area.

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#### Halifax Sidenotched

PLATE 16g

A specimen has these features: equilateral sides with one edge straight, the other excurvate; biconvex in cross-section; shoulders rounded; the sidenotches and slightly incurving base are ground.

Length: 4.1 cm.

Width: 1.8 cm.

Length of stem: 1.4 cm.

Width of base: 2.1 cm.

Width of stem between notches: 1.5 cm.

Thickness: 0.7 cm.

Material: Quartz.

Coe (1964, pp. 109–110) points out the greater distribution of these points to the north and east of the Roanoke River basin in North Carolina where, at the Gaston site, they have been dated by carbon-14 at  $3484 \pm 350$  years B.C. (M-523). In Virginia, McCary found them in the Dismal Swamp (1963, p. 46, type 25), Bushnell illustrates examples from the Rappahannock River (1935, pls. 6 and 20; 1937, pl. 12), and they are found in both the Piedmont Uplands (Holland, 1955, types I and M) and north-west Virginia (Holland, 1960).

#### Hamilton Triangular

PLATE 17 u-y

These were described by Lewis and Kneberg as Hamilton Incurvate (1946, pp. 110–111). On the specimens found in the survey area the edges of the blade are always incurvate, but the base, while typically straight, was also found to be incurvate and even excurvate. The cross-sections are flat and the retouch was directed to the removal of extremely small flakes of about 1 sq. mm.

Length: Average 2.9 cm; range 2.4–3.5 cm.

Width: Average 1.9 cm; range 1.2–2.3 cm.

Thickness: Average 0.4 cm; range 0.3–0.6 cm.

Material: Chert.

These points, like the Dallas Triangular group, were only found in the Appalachian Valley and Highland Provinces, not in the Blue Ridge Mountains or Piedmont Uplands. Lewis and Kneberg (op. cit., pp. 6–9) date these specimens as part of the Hamilton Focus or on a time level with Adena, lasting possibly up to Early Mississippian times. Figure 38 shows the geographical distribution within the survey area.

#### Lamoka

##### PLATE 16a-d

These are a distinctive group that fit into Ritchie's Lamoka points from New York (1961, p. 29) except for a length to width ratio. Ritchie indicates his specimens are two to three times longer than wide, which is greater than the southwestern Virginia examples. Ritchie dates these points from 3500 B.C. to 2500 B.C. in New York, and they should date the same in Virginia.

Fourteen specimens have the following characteristics: the blade is an isosceles triangle with a tendency to be excurvate with a biconvex cross-section. The shoulders may be rounded or angular and the stem either sidenotched or parallel-sided. About 20 percent show serration; beveling is present but not characteristic. A characteristic feature is the treatment of the base. Usually this retains the weathered exterior of the chert cobble from which a thick flake had been struck. If the weathered exterior of the original stone is not present, the striking platform is. There has been no attempt to alter this thick base and it is usually straight but may be slightly excurvate. Thus, the base presents a surface, not an edge, and the point is thickest here or at the juncture of stem and blade. Another distinct characteristic is the quality of the chipping. Flake scars are broad and often run half way across the blade. There is only meager evidence of retouch and there has been no grinding of the bases, stems, or notches.

Length: Average 3.1 cm; range 2.8–3.4 cm.

Width: Average 1.9 cm; range 1.5–2.4 cm.

Length of stem: Average 1.1 cm; range 0.8–1.6 cm.

Width of base: Average 1.3 cm; range 1.1–1.7 cm.

Thickness: Average 0.6 cm; range 0.4–0.8 cm.

Material: Chert.

#### Ledbetter

##### PLATE 18 a-c

In the group of large blades from southwestern Virginia, there were basal fragments that fit the

description given for Ledbetter points (Kneberg, 1956, p. 26). They have one sharp and one angular shoulder. The projected continuation of the edge from the sharp shoulder is recurvate, and either straight or excurvate on the edge with the rounded shoulder. The cross-sections are biconvex, the stems parallel-sided, and the bases rounded. Only one of the seven specimens has been ground, and here from the shoulders completely around the base. They were made by percussion with only minor evidence of retouch.

Length: Unknown as all are broken.

Width: Average 4.5 cm; range 4.2–5.0 cm.

Stem width: Average 2.1 cm; range 1.6–2.4 cm.

Stem length: Average 1.7 cm; range 1.0–2.2 cm.

Thickness: Average 0.7 cm; range 0.5–0.8 cm.

Material: Rhyolite and chert, in order of preference.

Geographically, these points are distributed on the South Fork of the Holston, in the upper New River basin within the survey area and on the Piedmont Uplands. Lewis and Lewis (1961, p. 34) indicate they are a Late Archaic type, more frequently found in eastern Tennessee than western Tennessee, and at the Eva site in western Tennessee they are associated with the Big Sandy component. Cambron and Hulse (1964) report they are found on Archaic sites in Alabama, but Coe (1964) does not report them from North Carolina, nor are they represented in the Dismal Swamp area of Virginia (McCary, 1963).

Lewis and Lewis (1961, p. 34) believed these artifacts were points rather than knives because of the shortness of the stem with reference to the length and weight of the blade. This conclusion is also made here, but the criteria is based on the chipping technique to differentiate knives from projectile points.

#### Levanna Triangular

##### PLATE 17k-o

A description of these points is given by Ritchie (1961, p. 31) in New York where they have been called Levanna, and he indicates they include the same type described for Virginia called Large Triangular—Type C (Holland, 1955, p. 165). The shape is an isosceles triangle with the sides straight on the vast majority but with a few incurvate or excurvate. The cross-section is flat. The chipping removed broad flakes, randomly spaced, but accomplishing the triangular shape. The bases are incurvate on most, followed next in popularity by straight bases, and with a few excurvate.

Length: Average 3.0 cm; range 2.0–5.0 cm.

Width: Average 2.3 cm; range 1.5–2.9 cm.

Thickness: Average 0.4 cm; range 0.3–0.9 cm.

Material: Majority chert, minority quartz.

Ritchie believes this type did not make its appearance until Middle Woodland times and gives a tentative date of about A.D. 700. He further believes they were supplanted by the Madison Triangular type (below), beginning around A.D. 1350. They are found over the entire survey area as well as the areas contiguous to it (figure 38).

#### Lowe Flared Base

##### PLATE 16r

These have been described from the Midwest by Winters (1963, p. 64) as follows:

Markedly flaring, straight sided stem; straight (rarely concave or convex) base; beveling of all the edges of the sides of the stem; frequent grinding of the sides of the stem; beveling of the base; frequent beveling of the edges of the blade; high incidence of hexagonal and lenticulate cross sections, lanceolate or triangular blade. Over 85 per cent of the points are made from blue or grey cherts (Dongola series) which would have had to have been imported from sources in the hills of southern Illinois or Indiana some 100 miles away.

Two points with these characteristics were found. The measurements of the complete specimen are:

Length: 3.0 cm.

Width: 2.6 cm.

Stem length: 1.3 cm.

Width of base: 2.1 cm.

Width of stem below blade: 1.6 cm.

Thickness: 0.6 cm.

Material: Chert.

This type of point is found with the Allison Complex, as well as the La Motte Culture in the Midwest to which it is antecedent in part, but the source of the Allison Complex is unknown (Winters, 1963, p. 56). The La Motte Culture represents a fusion of indigenous elements with influences from the south, particularly the Tennessee Valley and adjacent areas. The suggested dating for the La Motte Culture is A.D. 400 to 1000.

#### Madison Triangular

##### PLATE 17 f-j

These are isosceles or equilateral triangles in shape, and except for a small minority, generally have either straight or incurvate bases in about equal numbers. They are flat in cross-sections and all are chipped by pressure.

Length: Average 2.2 cm; range 1.5–3.0 cm.

Width: Average 1.7 cm; range 1.2–2.2 cm.

Thickness: Average 0.3 cm; range 0.2–0.6 cm.

Material: Majority chert.

These points are late in prehistoric contexts and in some areas are found in the Historic period. In Tennessee, Kneberg (1956, p. 24) relates them to the late

Mississippian cultures. In Virginia, these have been previously described as a late type, Medium Triangular Points—Type B (Holland, 1955, p. 166). Figure 38 shows the geographical distribution of triangular points within the survey area.

#### Merom Expanding Stemmed

##### PLATE 16 h-k

Winters (1963, p. 27, fig. 4, table 7, p. 111) illustrates this type as of the Late Archaic period in the Wabash Valley in Illinois, commonly associated with sites of the Riverton Culture with probable dates of 1500 to 1000 B.C. The five points recovered from Southwestern Virginia have isosceles triangle blades with the edges straight or slightly excurvate. The shoulders are rounded and asymmetrical. The base is straight or, due to the chipping, irregular since there was a removal of very broad flakes compared to the size of the points. There is minor use of retouch, no grinding of the base, and the blade is biconvex.

Length: Average 2.9 cm; range 2.7–3.3 cm.

Width: Average 1.4 cm; range 1.2–1.6 cm.

Length of stem: Average 1.0 cm; range 0.8–1.2 cm.

Width of stem: Average 1.1 cm; range 1.0–1.2 cm.

Width of base: Average 1.4 cm; range 1.3–1.5 cm.

Thickness: Average 0.6 cm; range 0.5–0.9 cm.

Material: Chert.

#### Morrow Mountain I

##### PLATE 15 i-k

These large blades, excavated by Coe (1964, pp. 37–43) at the Doerschuk site in North Carolina are believed by him to have their inception not much before 4500 B.C. (op. cit., p. 123), are biconvex in cross-section, have excurvate edges and asymmetrical shoulders. Often the shoulders are angular but may be rounded on one side. The stems are centrally placed and taper to a well-rounded base. Well-controlled percussion flaking was used entirely and they have straight, not wavy edges. There is no grinding of the base.

Length: Average 6.5 cm; range 4.7–7.5 cm.

Width: Average 3.9 cm; range 3.3–4.4 cm.

Length of stem: Average 1.9 cm; range 1.0–2.7 cm.

Width of stem at blade: Average 1.6 cm; range 1.0–2.0 cm.

Thickness: Average 0.7 cm; range 0.5–0.9 cm.

Material: Quartzite and rhyolite in equal proportions.

Geographically, they are found over the entire survey area as well as the rest of Virginia. In fact, large ovate blades with contracting stems are found as far away as Texas on about the same time level

(Almagre type; Suhm and Jelks, 1962, p. 161.). See Figure 40 for the geographical distribution within the survey area.

### Morrow Mountain II

#### PLATE 15 *g-h*

These are small contracting stem points that typologically fall into Coe's Morrow Mountain II category (Coe, 1964, p. 37). The blade is either equilateral or isosceles, and the edges are straight. The stem, formed by undercutting the blade, is placed midway between the shoulders and is usually rounded, contracting to a rounded base, without grinding. The cross-section of the blade is biconvex.

Length: Average 3.9 cm; range 2.5–5.7 cm.

Width: Average 2.0 cm; range 1.7–2.5 cm.

Length of stem: Average 1.0 cm; range 0.6–1.2 cm.

Width of stem at blade: Average 1.0 cm; range 0.7–1.5 cm.

Thickness: Average 0.6 cm; range 0.4–1.1 cm.

Material: Majority chert, minority quartz.

These are found over the entire survey area, as are Morrow Mountain II points, and undoubtedly have a wide geographical range. Rossville points described by Ritchie (1961, p. 46) are similar but are given a Late Archaic to Early Woodland date, contrasting with the 4000 B.C. date suggested by Coe (1964, p. 121). See Figure 40 for the geographical distribution within the survey area.

### Palmer Corner Notched

#### PLATE 15*f*

A single specimen of this type was identified. It had these characteristics: slightly incurving, serrated blade with diagonally formed notches; base straight and

thinned without basal grinding. This chert point is broken at 3.2 cm in length, is 2.2 cm wide at the shoulders; the stem is 0.7 cm long, 1.8 cm wide at the base, and 1.3 cm wide between the notches. It is 0.3 cm thick. Coe (1964, p. 122) traces them from Tennessee along the Atlantic Coast into New England. They date about 6500 B.C.

### Patrick Indented Base

#### PLATE 16 *e-g*

A group of points that did not fit any of the published types were separated out as a provisional type during classification. The name Patrick was chosen from the county in which they were most frequent. The indented base was the diagnostic feature and both parallel-sided and sidenotched varieties are included within the type.

The blade is generally excurvate, but may be straight, is nonserrated and biconvex in cross-section. Shoulders are rudimentary and rounded. The stems are either straight with parallel sides or have shallow sidenotches. One-half of the specimens have the stems and base ground smooth. A characteristic is the 1 to 3 mm indentation of the base, often produced by the removal of a single flake from each side of the base. Chipping is by percussion with the removal of random flakes; retouch is minor.

Length: Average 4.1 cm; range 3.4–5.7 cm.

Width: Average 2.2 cm; range 1.6–3.0 cm.

Length of stem: Average 1.1 cm; range 0.8–1.4 cm.

Width of stem: Average 1.5 cm; range 1.1–1.9 cm.

Thickness: Average 0.8 cm; range 0.6–1.0 cm.

Material: Half chert, half quartz.

The geographic range within the survey area is widespread, but they are concentrated in the Piedmont Uplands, for which see Figure 40.

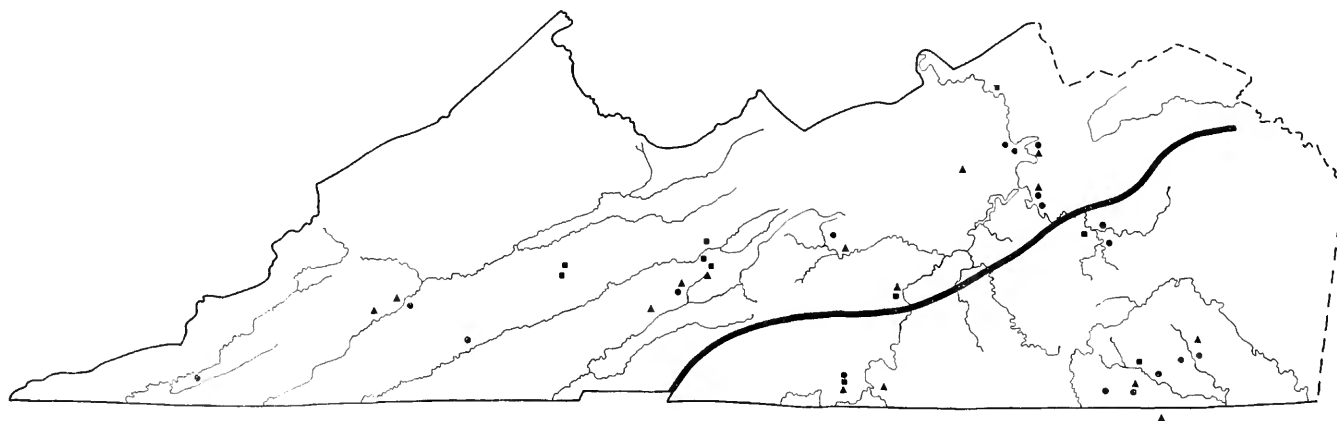


FIGURE 40.—Geographical distribution of Morrow Mountain I (squares), Morrow Mountain II (triangles), and Patrick Indented Base (circles) points. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east.



**Perkiomen Broad Spear**PLATE 16*l*

A typical specimen of this northern point (Witthoft, 1953, pp. 16–20) was recovered from Site Wy-6. It is 4.0 cm long, 3.9 cm wide; the stem is 0.9 cm long and 1.6 cm wide. The base is ground. It is made of jasper, the same material used to make these points in Pennsylvania. It has its highest occurrence in Schuylkill, Susquehanna, Delaware, and Hudson River Valleys (Ritchie, 1961, p. 43) but is known to occur in the Dismal Swamp in Virginia where two-thirds of them are made of chert (McCary, 1963, p. 46, type 19). The time at which these points appear is Late Archaic and Early Woodland.

**Potts**PLATE 16 *s-u*

These points are an isosceles triangle in shape, planoconvex to biconvex in cross-section with the edges either straight or slightly excurvate. The shoulders are usually sharply angular, but may be rounded. One of the main characteristics is the wide, short stem; another is the thinning of the stem. Both features occur on every point. The bases are widely incurvate 1 to 3 mm. No grinding appears on either the base or notches. The primary flaking of these points was done by percussion. Scars of this method are prominent on the medial sections of the blades. Pressure flaking was used for trimming the edges of the blade, base, and notches. There is good evidence of removal of parallel flakes from the base to produce the extreme thinness of the base.

Length: Average 3.6 cm; range 3.3–4.6 cm.

Width: Average 2.3 cm; range 1.9–2.8 cm.

Length of stem: Average 0.8 cm; range 0.6–0.9 cm.

Thickness: Average 0.6 cm; range 0.5–0.7 cm.

Material: Majority quartz, minority chert.

These points have been found on the Coastal Plain in Virginia (McCary, 1953), in the Dismal Swamp (McCary, 1963, p. 44, type 9), in the Stony Creek region south of Petersburg, Virginia (Holland, 1955, p. 171, fig. 23), and northeast of the survey area in the Appalachian Valley where they were designated as “Eared” or “Type O” (Holland, 1960). They are of the Early Woodland Period.

**Pulaski Corner Notched**PLATE 16 *m*

A single specimen of this type was recognized by Winters (personal communication) among the material from southwest Virginia. The name has nothing to do with Pulaski County in Virginia, but is from

Winters’ work in the Wabash Valley in Illinois. The point is 5.0 cm long, 3.0 cm wide and 0.7 cm thick. The blade is ovate, beveled alternately on each side. The stem is formed by deep corner notches, yielding sharp shoulders and an expanding type stem. The original flaking is by percussion followed by fine retouch along the entire periphery, and finally grinding of the base. The temporal placement is Archaic Period.

**Riverton Stemmed**PLATE 16 *o*

A single specimen was identified by Howard Winters (personal communication) of this type. It belongs to the Riverton Culture, an Archaic manifestation in the Wabash Valley of Illinois dating between 1500 and 1000 B.C. The blade is a long isosceles triangle, planoconvex in cross-section and chipped by pressure.

Length: 3.9 cm.

Width: 1.4 cm.

Length of stem: 1.0 cm.

Width of stem: 0.8 cm.

Width of base: 0.9 cm.

Material: Chert.

**Saratoga Parallel Stemmed**PLATE 16 *p*

These Late Archaic points (Winters, 1963, p. 22, fig. 4) are parallel-sided stemmed, the blade is excurvate, shoulders are rounded or tanged, and the blade planoconvex or biconvex. The stem is short and the base straight or slightly excurvate. Four of six specimens were ground about the base.

Length: Average 3.9 cm; range 3.4–5.0 cm.

Width: Average 2.8 cm; range 2.7–3.4 cm.

Length of stem: Average 0.9 cm; range 0.8–1.1 cm.

Width of stem at blade: Average 1.5 cm; range 1.2–1.8 cm.

Width of stem at base: Average 1.5 cm; range 1.2–1.9 cm.

Thickness: Average 0.6 cm; range 0.5–0.7 cm.

Material: Chert.

**Savannah River Stemmed**PLATE 18 *f-k*

These large blades have either straight or excurvate edges and are biconvex in cross-section. The shoulders are asymmetrical, one usually being rounded and the other approaches a right angle; in addition, one shoulder is usually wider than the other. The stems

are either parallel-sided or have a slight degree of taper to the base. The base may be either straight or incurvate, but the incurvate no more than 2 mm. Flaking was done by percussion, leaving broad scars that may run half way across the blade. The indented base is frequently prepared by the removal of a single flake. There is no evidence of retouch nor basal grinding.

Length: One specimen 9.5 cm; all others are broken.

Width: Average 4.1 cm; range 2.9–6.0 cm.

Width of stem: Average 2.2 cm; range 1.5–3.3 cm.

Length of stem: Average 1.7 cm; range 0.9–2.4 cm.

Material: Ferruginous sandstone, rhyolite, quartz, quartzite, and chert, in order of preference.

These blades occur all over the state of Virginia and were found over the entire survey area. They have been dated about 2000 B.C. in North Carolina (Coe, 1964, p. 124).

#### Stanly Stemmed

##### PLATE 15c

Based on the descriptions of Coe (1964, p. 35) two points were classified as Stanly Stemmed. Both are made from weathered chert and both broken but the remaining portions are 5.0 and 5.4 cm long. They are biconvex in cross-section, shoulders are rounded, and the blades incurvate. The base is rounded and short, and there is no evidence of grinding.

Width: 2.7 and 3.1 cm.

Length of stem: 0.9 and 1.0 cm.

Width of stem: 1.3 and 1.4 cm.

Thickness: 0.6 cm. for both.

Material: Chert.

The present evidence points to south and west as the possible areas of distribution (Cambron and Hulse, 1964) and the postulated date at the Hardaway Site in North Carolina is about 5000 B.C. (Coe, 1964, p. 121).

#### Wheeler Incurvate

##### PLATE 15 b, c

Two points fitting Cambron's description (Cambron and Hulse, 1964) have the following characteristics: the points are stemless with excurvate edges ending in sharp points made by indenting the base 0.3 to 0.5 cm and joining the edges of the blade; above the indented base the blade is 0.4–0.5 cm thick and 2.0–2.5 cm wide; the base, adjacent to the indentation is steeply beveled; although broken, they appear to have been 2.8–3.0 cm long; there is no grinding and they are made of chert.

Cambron (op. cit.) gives an Early Archaic or Transitional Paleo-Indian association for these points.

They have not been widely reported but are found in Tennessee and Alabama.

#### Upper Valley Sidenotched

##### PLATE 16a

A single chert specimen has slightly excurvate edges and a straight base. Shallow notches have been made 0.3 cm above the base on both edges of the blade. It is 4.6 cm long, 1.6 cm wide, and 0.4 cm thick. Chipping removed relatively large random flakes and there is no grinding of the base.

This type of point, described by Kneberg (1956, p. 27) is related to the Early Woodland in time and is found mainly in eastern Tennessee where it is named after the Upper Valley of the Tennessee River.

#### Unclassifiable Projectile Points

These are single specimens, or groups of two or three, for which published descriptions and/or the characteristics of the points were at variance and they could not be typed accurately. Creating provisional types would have added little to this study since neither the temporal proveniences nor cultural associations could have been worked out.

#### Unclassifiable Projectile Point Fragments

These are bits and pieces of projectile points which were not sufficiently complete to have any distinguishing features. They have been listed in the material recovered from sites since they are a part of the assemblages.

#### Unclassifiable Large Blade Fragments

Large blades had been frequently fractured so that only incomplete and unclassifiable objects remain. These are parts of Savannah River, Guilford, and Ledbetter specimens. They have been listed in the site descriptions not only because they are associated with certain sites but because of the rock types used in manufacture. Of 83 specimens, 25 are rhyolite, 24 quartz, 14 quartzite, 10 chert, 7 ferruginous sandstone, and 3 of unidentified stone.

#### TEMPORAL AND GEOGRAPHICAL RELATIONSHIPS OF PROJECTILE POINTS

Projectile points collected during this survey are like index fossils in that they provide general temporal references for occupation in the area. For example, the time over which Big Sandy Sidenotched and related types, such as Faulkner Side Notched (p. 84), occur, varies as much as 4000 years while Lamoka points

(p. 88) are given a 1000-year range and Lowe Flared Base (p. 89) 600 years. Also like index fossils there is some evidence of evolutionary development for a few types but the majority appear to jump from one type to another through time without intermediary stages. Thus Savannah River Stemmed (p. 91), Merom Expanding Stemmed (p. 89), Riverton Stemmed (p. 91), Saratoga Parallel Stemmed (p. 91), and Ledbetter points (p. 88) all belong to the Late Archaic Period but there is no development to show they were antecedent to Potts points (p. 91), Bradley Spike (p. 85), or Upper Valley Sidenotched (p. 92), all of which are of Early Woodland times. On the other hand the best evidence for evolutionary development is in the simple triangular points where the general shape and chipping techniques remain constant but the size diminishes through time. Such a progressive change has been demonstrated in the Piedmont of Virginia (Holland, 1955, fig. 23) and the Piedmont of North Carolina (Coe, 1964, fig. 116). In both of these areas the earliest triangular points are relatively large but with the passage of time decrease in size until they are quite small, that is from the types Levanna Triangular (p. 88) through Madison Triangular (p. 89) to Clarksville Small Triangular (p. 85).

When the projectile point types are placed in a chronological table (Table B), they span the entire range of aboriginal occupation for the Eastern United States. The dates, of course, are subject to revision since none were derived in the survey area, the continuum over which a particular point was made is poorly known, and such terms as Early Archaic, Late Archaic, and Early Woodland are not only poorly defined chronologically but undoubtedly vary from region to region within the larger area of the Eastern United States due to cultural lag and accelerated cultural change in the various regions.

The projectile points associated with carbon-14 dates in the survey area agree fairly well with dates assigned them by other archeologists. Site Pu-9, Level 18-24 inches, dated A.D.  $1330 \pm 120$  years (SI-130) contained no projectile points but in Level 12-18 inches there were one Madison Triangular and two Levanna Triangular points. At Site Pu-3, Level 12-24 inches, dated A.D.  $1600 \pm 200$  years (SI-129) there was a single Dallas Triangular point. At Site Le-17B, Level 18-24 inches, the carbon-14 date is A.D.  $1210 \pm 120$  years (SI-131). In Level 12-18 inches there was a single Hamilton Triangular point. These dates should be compared with the estimated times in Table B.

Points with the widest reported distribution are Clovis, Big Sandy Sidenotched, and Madison Triangular and these have been reported over most of the Eastern United States. Those which to date relate

TABLE B.—*Relative ages of projectile points*

<i>Projectile point</i>	<i>Relative age</i>
Clarksville Small Triangular	Protohistoric to Historic
Dallas Triangular	Before A.D. 1540
Madison Triangular	Mississippian
Hamilton Triangular	Pre-Mississippian
Levanna Triangular	A.D. 700 and later
Lowe Flared Base	A.D. 400-1000
Potts	Early Woodland
Upper Valley Sidenotched	Early Woodland
Bradley Spike	Early Woodland
Perkiomen Broad Spear	Transition Early Woodland-Late Archaic
Merom Expanding Stemmed	1500-1000 B.C.
Riverton Stemmed	1500-1000 B.C.
Savannah River Stemmed	1500 B.C.
Ledbetter	Late Archaic
Saratoga Parallel Stemmed	Late Archaic
Lamoka	3500-2500 B.C.
Halifax Sidenotched	3500 B.C.
Guilford Lanceolate	4000 B.C.
Morrow Mountain I and II	4500 B.C. and later
Stanly Stemmed	5000 B.C.
Cache Diagonal Notched	Early Archaic
Palmer Corner Notched	6500 B.C.
Big Sandy Sidenotched	7000-3000 B.C.
Hardamay Sidenotched	7000 B.C.
Wheeler Incurvate	Transition Paleo-Indian-Early Archaic
Dalton	Transition Paleo-Indian-Early Archaic
Clovis	Paleo-Indian

to the Midwest are Lowe Flared Base, Merom Expanding Stemmed, Riverton Stemmed, Saratoga Parallel Stemmed, and Cache Diagonal Notched. Lamoka points are reported from Michigan to New York (p. 88) and are also found at Indian Knoll and Carlson Annis Sites in Kentucky (Dragoo, 1959, pp. 219-221). Ritchie (1961, p. 31) gives the distribution of Levanna Triangular points from New York, much of New England, southeastern Ontario, the Middle Atlantic area, and eastern Pennsylvania, to Virginia. Perkiomen Broad Spear points have a similar but more restricted northern spread. Dallas Triangular, Hamilton Triangular, Upper Valley Sidenotched, and Ledbetter are styles that probably entered the survey area from Tennessee and relate to the southeast. The distribution of Bradley Spike, found in Tennessee and Alabama (Cambron and Hulse, 1964) and its related type, Bradshaw Stemmed (p. 85) of the Midwest, has not been more widely reported, nor has Wheeler Excurvate that is also found in Tennessee and Alabama (op cit.). Projectile points with a more restricted spread are Potts in the Virginia Coastal and Piedmont areas (Holland, 1955, p. 171, type O; McCary 1953; 1963), Halifax Sidenotched (p. 87) Clarksville Small

Triangular (p. 85), and Guilford Lanceolate (p. 86). Savannah River Stemmed (p. 91) is well reported over the southeast (Coe, 1964, p. 45). Dalton and Morrow Mountain Stemmed have a wide geographical

range that has been imperfectly worked out and the types Hardaway Sidenotched, Stanly Stemmed, and Palmer Corner Notched have not been sufficiently reported to develop their distribution.

## Other Cultural Items

This section contains descriptions of antler, bone, shell, pottery, and stone artifacts not considered under previous headings. The arrangement is alphabetical by artifact type. An effort has been made not only to describe the artifacts recovered from the survey, but also to introduce published data and observations pertinent to the region, so that the comparative comments are associated with each artifact type rather than in a separate section.

### Adzes

Adzes are distinguished from celts by being plano-convex in cross-section, cruder in workmanship, and with a bit flat on one face, and the other face beveled. Of six specimens identified as adzes, only one, from Pu-1, had been partly pecked to shape after it had been roughly formed by percussion. Another from St-1 is narrow toward the poll, and the edges have been dulled as compared with the body of the implement, apparently for hafting purposes. They measured:

Length: Average 114 mm; range 103–140 mm.

Width: Average 55.5 mm; range 39–86 mm.

Thickness: Average 16.8 mm; range 10–37 mm.

Width of bit: Average 37.4 mm; range 15–83 mm.

Material: Indurated sandstone, chert, rhyolite, greenstone, shale, silicified schist.

### Atlatl Weights

#### PLATE 19 *f-g*

One-half of a “prismoidal” type atlatl weight, resembling those described by Lewis and Lewis at the Eva site in Tennessee (1961, p. 66; pl. 28, fig. E) came from Le-13. It is 5.7 cm long, 4.8 cm in reconstructed width, and 2.0 cm thick at the hole, rectangular in outline and cross-section, and made of a hard, micaceous steatite. The edges are rounded, and the surfaces have been abraded and highly polished. The hole,

reed-drilled through the long axis, is 1.0 cm in diameter with parallel sides and circular scars from drilling have almost been eradicated. On one face there is a series of 10 nesting M-shaped lines, running halfway across that side of the face. Where these leave off there are several square-angled Z-shaped lines. Medial to the Zs are short lines with square angles, forming a maze.

Two fragments of “winged” or “butterfly” atlatl weights were also found at Ru-8 and Wy-8. Both were made of micaceous schist, highly polished, with a rounded contour to the edge.

### Awls

#### PLATE 20 *a-c, f*

BONE SPLINTER AWLS.—The most common awl is the so-called “splinter” type, of which there are 13 examples. They vary from 3.2 to 8.1 cm in length, using both animal and bird bones. Little more attention seems to have been paid to their manufacture than rubbing the pointed end of the splinter against an abrasive surface in a direction parallel to the length of the awl to sharpen and smooth down the point. One awl from site Gs-3, however, has had the functional end shaped by coarse abrasion at right angles to the length, both on the face and side of the splinter. The more carefully prepared awls are from bird leg bones and came from Gy-10 burial, My-11, Level 24–30 inches, and Pu-3, Level 6–12 inches. The awl from Gy-10 is 12.0 cm long with a flattened area for a hand grip.

DEER ULNA AWLS.—The ulnae of three juvenile and two mature deer retained the coronoid process, olecranon, and joint while the diaphysis had been abraded to a 3 to 5 mm thin, flat tapering shaft. There were a total of three specimens found at My-11, Level 6–12 inches, and 1 specimen in Level 24–30 inches. All the shafts had been broken and measured

from 9 to 14 mm wide at the break. The full length of the shaft could not be determined and it is possible these could have been used for something else requiring a more blunt end than an awl (Plate 20 *a-c*).

These deer ulna awls have a long history and a widespread geographical range. They were found frequently in the Eva component in Tennessee (Lewis and Lewis, 1961, p. 78), and less often in the other levels at the Eva site. They are associated with the Morrow Mountain complex at the Stanfield Worley shelter in Alabama (DeJarnette, Kurjack and Cambron, 1962, p. 83, fig. 46). Similar specimens were associated with the Dallas component at Hiwassee Island in Tennessee (Lewis and Kneberg, 1946, pl. 77a) and Miller (1962, pl. 65, fig. n) depicts them from the Clarksville site in Virginia, but they were not found by Coe (1964) at his excavations in North Carolina. The ulna awls found at the Keyser Farm site in northern Virginia (Manson, MacCord, and Griffin, 1943) do not show retention of the joint in shaping the tool, nor do those found at Accokeek in Maryland (Stephenson and Ferguson, 1963, pl. 38), a characteristic feature of the specimens from southwest Virginia.

#### Axes

PLATE 21 *a, b*

Only two varieties of axes were found in the survey area: polished, fully-grooved and percussion flaked. The polished fully grooved variety is related to the Woodland type of eastern Tennessee described by Lewis and Kneberg (1946, p. 116); however, there are differences in the southwestern Virginia specimens that may be significant. The percussion flaked ax is similar to the Guilford axes described by Coe (1964, p. 113). The polished axes come from two sites.

Measurements	Polished Axes		Guilford Ax
	Wy-6 (cm)	Tz-8 (cm)	Pk-22 (cm)
Length	20.0	20.9	12.8
Length of blade	11.8	11.2	6.0
Maximum width	8.3	9.3	8.8
Width across groove	4.5	7.5	5.8
Depth of groove	2.2	1.0	
Length of poll	2.8	6.9	6.3
Thickness	4.2	4.0	4.2
Contours	rounded	rounded	rounded
Final finish	pecked and polished	pecked and polished	percussion flaked

#### Beads

PLATE 22

**BONE BEADS.**—Three types of bone beads were recovered in the area. One is made from a bird bone, 1.6 cm long, with the ends ground smooth. This large type came from My-11, Level 12–18 inches, and Pu-3, Level 18–24 inches. Another type is short and made from either a small animal or bird, measuring 1.7 to 2.0 cm long and 5 mm in diameter. These came from Pu-3B, and My-11, Level 6–12 inches. A third type is 1.1 cm long and 1.4 cm in diameter. This was donated to the survey by a local collector (Plate 22j).

**SHELL BEADS.**—*Marginella* is so commonly dug up in village sites, a two-foot string sells for 50 cents. A single *Marginella* bead was found at Sm-5. *Oliva* were found at Sm-5, Sm-16, and Ru-1. For stringing the shoulder on the former and the apex on the latter had been ground off. (Plate 22c, d). At Le-17, both, the surface and at a depth of 6–12 inches, *Leptoxis subglobosa* shells had been drilled. One specimen had two holes 1 mm apart, and the other had only a single hole. These may not have been beads but a type of ornamentation.

Disk beads, from 1 to 2 mm thick and 0.8 to 1.8 cm wide, were donated to the survey collections and are reported to have been associated with burials in the area. Also donated were smaller beads 3 mm wide with 1 mm holes, leaving a circular band or shell about 1 mm thick. In addition to these conch columella beads 10 to 15 cm long and from 1 to 2 cm thick were seen which had been dug up with burials.

**METALLIC BEADS.**—Native copper beads from thin sheets rolled to form a bead 3 mm thick and 1.0 cm long were donated to the survey. There were reports of much larger type, in the neighborhood of 5 cm. A string of brass beads, 3 mm wide and 4 mm long, with a cotton string running through them was found at Tz-9.

#### Balls

PLATE 19 *a-d*

Stones, shaped to a spheroid with partially polished exteriors, were found in two sizes. The smaller ones measures 2.1 to 2.5 cm in diameter and resemble marbles but are definitely not of European origin (Plate 19 *b-d*). The larger type, found at Site Tz-8, is not as smooth and measures 6.5 cm in diameter (Plate 19a).

#### Celts

PLATE 21 *c, d*

Two varieties of celts may be differentiated on the basis of size: a large and a small variety. The larger

variety are long, trianguloid in shape with rounded polls and distinctly oval cross-sections (Plate 21 *c, d*). The bit is symmetrically placed between the two faces, and may be sharp and without fractures, or show loss of large and small flakes through use. The poll also may show the effect of use through crumbling of the stone.

The sample for the small variety is inadequate because they are represented by fragments only. The bits are badly broken and show continued use after the original breaks, for the hinge fractures are worn smooth. One side is flat, the other rounded.

<i>Measurements</i>	<i>Large Celts</i>		<i>Small Celts (cm)</i>
	<i>Average (cm)</i>	<i>Range (cm)</i>	
Length	11.7	10.0–12.5	unknown
Width at bit	5.4	4.6–6.5	2.7
Thickness	2.3	1.9–3.2	1.4
Length of cutting edge	2.7	2–4	1.5
Treatment	pecked and polished		pecked and polished
Material	4 greenstone, 1 lime-stone		2 green-stone

It would appear the larger celts are associated with the older Woodland groups, and that the smaller are more recent. Coe (1964, p. 114, fig. 112) distinguishes two types in North Carolina, the larger associated with his Clements period and the smaller with the Gaston. The smaller variety of southwest Virginia is more likely to be identified with the Dallas component of Tennessee than the other components, while the larger variety may be associated with both Hamilton and Dallas components of Hiwassee Island in Tennessee (Lewis and Kneberg, 1946, p. 116).

#### Containers

**TERRAPIN CARAPACE.**—The Carolina terrapin carapace with its relatively deep trough was used as a bowl or cup by grinding out the vertebral column and abrading the edges of the carapace. The ground edges show no definite preference of slope, some being flattened, some inclining toward the interior, and others toward the exterior. When ground the edge of the carapace had been removed, but on other specimens the edge of the carapace had not been removed but instead had worn slick from use.

Two bowls deserve special mention. One, from My-11, Level 6–12 inches, is decorated by four groups of three incisions symmetrically placed on the lip or anterior part of the carapace. The incisions are 1 mm apart and the groups are 5 mm apart. The other

specimen, from My-11, Level 18–24 inches, is the bottom of a bowl that retains segments of the worn down vertebrae. This area is covered by yellow to red hematitic pigment, predominantly red, suggesting use as a “paint cup.”

**STEATITE BOWLS.**—Partially worked boulders of steatite and fragments of unfinished pots found at Ca-8 indicate that these containers were oval, some with protruding handles at each end, and all determined by the size of the boulders, or about 30 cm long, 20 cm wide, and 12 cm to 15 cm deep.

#### Cores

In the reduction of a core for making artifacts there must come a point when the core is no longer of sufficient size to produce flakes either long enough, or wide enough to shape into tools or points. A group of spherical or hemispherical nodules, showing extensive flaking, but no evidence of use were recovered. The flaking was invariably done by percussion and many of the pebbles still retain the deeply weathered exteriors of the original surface. It is believed that these represent the remains of abandoned cores. Furthermore they indicate, from the presence of the weathered surfaces on these items, that the primary source of raw material was waterworn eroded pebbles or cobbles, not vein rock.

Length: Average 4.3 cm; range 3.2–6.4 cm.

Width: Average 3.2 cm; range 2.4–4.0 cm.

Thickness: Average 2.0 cm; range 1.1–3.0 cm.

Material: 16 chert, 5 quartz.

#### Cup-and-Pin Gaming Pieces

At Sm-25 two proximal phalanges of deer had been drilled through the distal articular surface to the marrow cavity, leaving 2 mm wide holes with a conical opening. The proximal ends had been irregularly cut off; on the complete specimen the border is scalloped. The functional significance of these objects most closely approximates the “cup” of the cup-and-pin game.

#### Disks

##### PLATE 23 *a–f*

**STONE.**—Fourteen were recovered either on the surface, or at a depth of 6–12 inches. Ten of these are circular, three are slightly elliptical but deviate from the true circle by no more than 4 mm, and one is rectanguloid, measuring 4.5 cm by 5.3 cm. Only 10 have flat faces, the other four are truncated cones, that is, having one face narrower than the other. They are shaped by grinding the edges smooth, but either one or both faces are natural stone or both

faces have been ground smooth. One disk has been shaped by percussion and then ground, but not sufficiently to remove all flake scars. While none had crosses incised on the faces in the survey sample, they were seen in private collections.

Diameter: Average 3.1 cm; range 2.0–5.6 cm.

Thickness: Average 1.3 cm; range 0.7–1.9 cm.

Stone: Siltstone, sandstone, limestone, hematite, in order of preference.

Information based on the excavations at Hiwassee Island in Tennessee (Lewis and Kneberg, 1946) shows that stone disks are on a time level with the Dallas component (op. cit., p. 121, 148), that is Late Middle Mississippi, and that they occur on the same time level as pottery disks.

POTTERY.—Pottery disks were shaped from sherds and were all circular except two which were slightly elliptical, varying from circular by not more than 3 mm. One disk was ground on the edge so that it was beveled, giving it a truncated cone shape, a shape associated with some of the stone disks.

Diameter: Average 3.2 cm; range 2.7–4.5 cm.

Thickness: Agrees with the pottery series of which they were made.

Pottery series: Radford Plain, Radford Knot Roughened and Net Impressed, and Cordmarked; New River Plain, New River Cordmarked, New River Knot Roughened and Net Impressed; Wythe Net and Knot Roughened, Wythe Fabric Impressed, Wythe Plain; Dan River Net Impressed, various unclassified series.

The distribution of stone and pottery disks in Virginia forms an interesting pattern. They are a distinctive feature of the survey area, occurring over the entire southwest Virginia. Miller (1962, pls. 9k, 22g, 61 a–k) depicts them from sites in the Buggs Island area of central southern Virginia. Coe (1964) does not show that they occurred on sites that he surveyed or excavated in North Carolina. They have not been reported from sites in the northern Shenandoah Valley, northern Piedmont, or the Coastal Plain in the Mid-Atlantic area. It would appear therefore that the cultural activity with which they are associated, presumably some type of game, filtered into southwest Virginia along the New River and other southwest flowing rivers and spread eastwards to the Mayo, Dan, Smith, and Roanoke Rivers of the Piedmont.

#### Drills

#### PLATE 24

Stone perforating tools have a long history, and some forms, such as the I or "straight" drill, cut across cultural boundaries at various time levels in one area or widely spaced regions. There appear two

methods to link them to any particular culture. The most trustworthy is their association with specific assemblages which are culturally assignable. A second, less reliable method is to sort out those which are reworked projectile points and assign them on the basis of the projectile point type, the base of the projectile usually being the haft of the drill. This is dangerous to do because a later group may rework the point of an earlier group, thus giving a false clue.

For comparative studies, a review of the literature shows that drills have been poorly described. The author is usually content with an adjective, such as "expanding," "T," "notched," or "unmodified," to designate the haft, believing that the bit is unworthy of note. This means that drills made from flakes, with a flat cross-section of the bit, cannot be separated from those made from flakes sufficiently thick to result in a diamond or biconvex bit. Furthermore, an expanding haft may be hardly wider than the bit, or several centimeters wide, a factor which may reflect the type of socketing for use, such as by hand or in a slender reed or dowel. An attempt was made to classify the drills from the survey area into several types, each to be described in detail.

"STRAIGHT" OR I-DRILLS.—These are defined on a basis of bit and haft being the same width, and separable only by special treatment of the haft (Plate 24 *m–n*). The haft corners are usually angular, occasionally rounded, and this area is distinguishable from the bit because the base of the haft has been thinned. Chipping was randomly spaced and resulted in broad flake scars, made by pressure. Ten were broken 1.0 to 2.0 cm from the base of the haft, leaving so little of the bit that they were not measurable for quantitative purposes.

Length (N-2): 35 mm.

Width of haft (N-14): Average 14.8 mm; range 9–17 mm.

Thickness: Average 4.6 mm; range 4–6 mm.

Cross-section: Flat to biconvex.

Material: All chert.

Provenience: All found on ceramic bearing sites.

It is evident from the foregoing that these objects could have been used as projectile points. However, the treatment of the haft, the consistent point of breakage, and comparison with all the projectile points recovered, leads to the conclusion that they were drills. They were, apparently, socketed in a dowel or reed with the fractures occurring near the edge of the overlapping socket.

EXPANDING HAFT DRILLS, TYPE I.—These were defined on a basis of a narrow bit which, toward the haft end begins to expand, forming V-shaped hafts (Plate 24 *a–e*). Chipping is done by well-controlled



pressure, and varied from random broad flakes on the haft to fine, minute flakes removed from the bit. All specimens were made from flakes of sufficient size to provide the tool.

These drills were probably not hafted, but rather used between the finger and thumb in a twisting motion. This cannot be determined with certainty as some bits are broken just below the haft. None would be confused with projectile points, due to the distinctive separation of bit from haft. The closest projectile point analogy is Hamilton Triangular, but here there is an uninterrupted continuation of the sides of the blade to the base. Measurements on the 21 specimens are:

Length (N-8): Average 27.8 mm; range 20-39 mm.

Length of haft: Average 10.8 mm; range 10-15 mm.

Thickness: Average 4 mm; range 2-7 mm.

Width of haft at base: Average 19.9 mm; range 14-25 mm.

Base: Incurvate, straight and excurvate in order of preference.

Material: Chert.

EXPANDING HAFT DRILLS, TYPE II.—These items contrast with the Type I drills in a number of ways: (1) there is no standard pattern to the expansion of the haft. These may be rounded, square, V-shaped, oblong, and one appears to have been a heavily reworked projectile point; (2) the uniform separation between bit and haft is not present nor of definable proportions; (3) the chipping shows both percussion scars and pressure scars, the latter used to modify the percussion scars sufficiently with the removal of broad, random flakes to bring the tool to an edge and drill shape; (4) the bits are planoconvex or strongly biconvex rather than flat. They are also slightly thicker than the flat type, averaging 4.6 mm, with a range of 3-6 mm.

Most of the specimens are broken just below the haft (Plate 24 *o-r*) but one complete drill measured 43 mm. It would appear that most of these were broken in use and were probably used in a dowel or reed shaft.

Width of haft: Average 18 mm; range 15-26 mm.

Width of haft-bit junction: Average 9 mm; range 8-14 mm.

Material: Chert.

EXPANDING HAFT DRILLS, TYPE III.—As with Type I drills there is some uniform pattern to the manufacture of these. The hafts form a crude cross (Plate 24 *f-i*). The angles with the cross are rounded by the random removal of flakes by pressure. Some idea of their shape may be gained from their measurements,

below. These were probably hafted in a shaft, the "crossbar" being an innovation to keep the drill from slipping in the socket during rotation.

Length of haft: Average 25.4 mm.; range 20-30 mm.

Width of "cross-bar": Average 17.4 mm.; range 12-23 mm.

Width of base of haft: Average 9.7 mm.; range 5-18 mm.

Width of base at bit: Same as above.

Material: Chert.

UNMODIFIED HAFT DRILLS.—If the haft had not been modified, that is, chipped to a specified shape or otherwise altered, drills were put into this category. A similar type is described by Coe (1964, p. 54; figure 43A) and called Caraway drills. In the survey area only three with this distinctive characteristic were found (Plate 24 *j-l*). They were found on ceramic-bearing sites, one at a depth of 12 to 18 inches (Pu-3). All are chert and the weathered exterior of the original stone remains on the haft. Two have measurable lengths of 42 and 45 mm and both have bits 6 mm wide and 3 mm thick.

These were chipped from small nodules of chert or a thick flake. Hafting would have been difficult, and it is assumed, as Coe (1964) does, that they were held in the hand.

#### Fishhook Blank

While no complete fishhooks of bone were found, a fragmentary blank from which a fishhook could have been cut was identified from Gy-10C, Level 21-27 inches. The blank consists of a rounded splinter polished on the outside and beyond the break on the interior, measuring 1.3 cm wide and 4 cm long.

#### Gouges

PLATE 25 *a, b*

This class of core-like artifacts, apparently for woodworking, in cross-section has a steeply keeled face on one side while the other is either flat or slightly convex. One end is rounded while the other is pointed. Often hinge fractures develop around the pointed end. These objects were percussion made and apparently hand held since no evidence of hafting can be discerned.

Length: Average 7.5 cm; range 5.5-20.6 cm.

Width: Average 6.8 cm; range 2.8-10.7 cm.

Thickness: Average 2.3 cm; range 1.1-3.7 cm.

Material: Chert, ferruginous sandstone.

These objects must have a long history, the tradition beginning in the Archaic Period and probably continuing to the Historic Period.

**Gravers**PLATE 26 *f-m*

Two varieties of gravers were encountered based on the original items from which they were fashioned. The majority were formed on a free or lamellar flake (Plate 26 *f, g, k-m*) whose size and shape varied so greatly no measurements were meaningful. Another set of graving points were secondarily formed on projectile points (Plate 26 *h-j*). In both groups the tips had been often broken off. In the former group, where this was suspected the site descriptions indicate this by the term "utilized flake." In the latter group the graver is indicated rather than the projectile point. All were chert.

**Hammerstone-millingstones**PLATE 19 *e, h, j, k*

These artifacts have been variously described as manos, hammerstones, mullers, pitted hammerstones, anvil stones, etc. These functional categories separate one from the other into isolated units. A detailed examination of these artifacts from the survey area suggests some had multiple functions, and with this in view the following criteria were established. If the object was used sufficiently as an abrading or millingstone it would show loss of the original patina with exposure of the subpatina stone. If use had not worn away the patina, abrasion would have eroded the slick shine over a limited area of the surface. If used instead as a hammerstone there would be multiple pits with crumbling of the surface where it had been struck against another object or consolidation of these small pits into a large one with an irregular, battered surface. If evidence of both grinding and hammering were present, a specimen certainly had had a multiple function.

The following classification was made: Fifteen stones had been used solely for abrading or milling, six had been used solely for hammering, and ten for both milling and hammering. Large bifacial pits appeared on eight specimens and was associated with hammering on four, and both hammering and milling on four. Only one stone had a single pit on the face. It is evident that milling is by far the major activity for which these objects were used, with hammering a close secondary attribute. Moreover these objects had multiple function more often than a single one.

Facial pits were made by crumbling in all cases but one, that had an even, smooth surface which could have come about only by abrasion. This latter could have been a socket for a drill. The hammered pits were of equal size on both faces and may either represent fingerholes or use as an anvil. If used as an

anvil it is difficult to understand why both faces should be pitted to the same depth of 0.3–0.4 cm, and an average diameter of 1.5 by 3.0 cm.

Length: Average 6.5 cm; range 3.0–14.2 cm.

Width: Average 5.3 cm; range 2.8–8.7 cm.

Thickness: Average 3.3 cm; range 1.2–5.9 cm.

Material: Sandstone, rhyolite, quartzite, quartz, greenstone, soapstone, listed in order of preference.

Three specimens were separated from the previous category. One is the poll of a greenstone celt, fractured along a natural plane of cleavage used as a hammerstone. The second is a granite, celt-like object with the bit worn smooth and flat from milling. The third is a rhyolite tool with a hand grip formed by percussion and one end blunted by use as a hammerstone and millingstone.

"Bell-shaped" millingstones, apparently exclusively used with metates, were seen in collections, but none were found. These have a conical handle, slightly longer than the width of the hand with a rounded poll and a milling surface of the same size as the base of the cone or slightly flaring beyond the base. A similar type was found at Hiwassee Island in Tennessee as a part of the Hamilton Focus (Lewis and Kneberg, 1946, pl. 67D, p. 117).

**Hand Choppers**PLATE 25 *e-g*

These shaped tools are differentiated from cores in that they show evidence of use by the development of hinge fractures along a limited distance of one edge. This may be so pronounced the edge has been dulled. Laterally from the point of use the edge is quite sharp. Opposite the used area there is a backing, either the rind of the original cobble or a flat surface formed by flaking. All the flaking has been done by percussion. They are differentiated by size from the smaller backed knives; Most of the choppers are large enough to fit comfortably in the hand.

Length: Average 5.1 cm.; range 3.2–7.3 cm.

Width: Average 4.4 cm.; range 2.5–7.4 cm.

Thickness: Average 2.2 cm.; range 1.0–4.6 cm.

Material: Majority equally divided between chert and quartz; minority rhyolite, quartzite, and limestone.

There is not enough information to develop the regional and temporal characteristics of these tools. In the survey area they were most frequently associated with Archaic Period sites.

**Knives**

PLATE 27

UNBACKED KNIVES.—These are elongated blades, worked on both faces and brought to roughly oval or

triangular shape, the former more common than the latter (Plate 27 *a-i*). The process of chipping, usually by percussion, follows a pattern of first from one face and then the other on the same edge so that an irregular, often sinuous edge is formed. This is in contrast to projectile points where the chipping has formed a straight edge with very little or no undulation of the opposing faces at the edge. Some idea of the difference between projectile points and knives may be seen by contrasting the photographs of knives (Plates 27) with Savannah River Stemmed points (Plate 18 *f-k*) and Guilford Lanceolate points (Plate 15 *n-r*). This difference appears to represent different functions for the two classes of artifacts. For knives the irregularities aid by increasing the friction between knife edge surface to which it is applied. For projectile points the lack of irregularities and increased straightness of the edge facilitates penetration.

Another characteristic of knives is the development of hinge fractures, often appearing on both faces of the blade, resulting in a dulling effect and straightening of the edge. While the small hinge fractures may not be seen adequately in the pictures, some idea of the effect may be observed on Plate 27*c*, where the left hand edge, bottom and lower right hand edge have been worn smooth as compared with the upper right hand edge that is unmodified by hinge fractures. A similar contrast may be seen on Plate 27*d*, where the left hand edge shows marked use as opposed to the right hand edge. The effect of use in some cases is so great that the used edge is almost smooth. At other times the hinge fractures are few in number and only the chipping technique provides a basis for classification.

It could not be determined with certainty whether unbacked knives were hafted or held in the hand during use. Some had rudimentary hafts as seen on Plate 27*h*, which suggests some were hafted; possibly most were hafted.

Length: Average 4.6 cm; range 2.9–6.3 cm.

Width: Average 2.3 cm; range 1.8–3.1 cm.

Thickness: Average 0.9 cm; range 0.5–1.5 cm.

Cross-section: Planoconvex or biconvex.

Material: Follows the geographical distribution of available stone.

**BACKED KNIVES.**—Chipping technique and use characteristics are the same for this functional category as the unbacked knives. However, chipping by percussion is less well controlled, forming broader and longer flake scars. Highly characteristic of backed knives is the peripherally flattened surface on one or three edges. This may be the weathered exterior of the nodule from which it has been flaked, a plane of natural cleavage in the rock, or has been fashioned by chipping a flat surface. The flat surface

is perpendicular to the plane between the two faces. (Plate 27 *j-m, p, q*).

The shape of these artifacts is highly irregular, some being square, many triangular or crudely oval. The flattened surface or surfaces suggest they were held in the hand during use.

Length: Average 4.7 cm; range 3.5–5.7 cm.

Width: Average 2.7 cm; range 1.8–4.0 cm.

Thickness: Average 1.2 cm; range 0.5–2.5 cm.

Material: Follows the geographical distribution of available stone.

**LAMELLAR FLAKES.**—These were separated out as a category since the sharp edges may have been used for cutting soft material such as meat. They showed no sign of use (Plate 28*y*).

Length: Average 4.3 cm; range 2.8–5.5 cm.

Width: Average 2.0 cm; range 1.7–2.5 cm.

Thickness: Average 0.3 cm; range 0.2–0.4 cm.

#### Pendants

PLATES 19*i*, 23*n*

Besides the complete specimen from the burial cairn at Tz-8 (Plate 23*n*), two others were found. One (Plate 19*i*) from Le-14 is elliptical in outline, biconvex in cross-section and made of greenstone. It has been fractured through a conically drilled hole that was done from both faces. There are 5 shallow notches at the end. The remaining segment is 5.6 cm long, 4.5 cm wide, and 0.9 cm thick. The other specimen, not here illustrated, is from Ru-3B, made of schist, is flat and has the edge serrated with 2-mm deep V-shaped notches, only five of which appear on the fragment.

#### Perforators

PLATE 26 *a-e, n-q*

**MICROPERFORATORS.**—Two small, sharply pointed chert objects, first thought to be gravers, were found at Gy-10. Later they were classified by Howard Winters (personal communication) as microperforators based on his experience with the Riverton Culture in the Wabash Valley. Both are trianguloid in shape, approximately 1.0 cm wide at the base, 2.0 cm long, and 0.4 cm thick. One is a flake, the other is bifacially chipped and both have been brought to a needle sharp point (Plate 26 *d, e*).

**REAMERS.**—As a class or category of implements, these objects are larger than gravers and do not have the needle-like point, nor can they be classed as drills since they do not have the long, thin bit. They show, however, evidence of use by the development of hinge fractures at the point and along the sides near the point. They were made from a variety of basic items such as free flakes, cores, and reworked projectile

points or drills. The "reaming" portion is usually triangular in shape (Plate 26 *a, c*) while the handle portion is broad. The implication is that they were held in the hand during use and not hafted. In fact the specimen on Plate 26*c* is pyramidal from its point, enlarging to a rectangular base 1.6 cm by 2.0 cm in size, and could not have been comfortably seated in a haft. These specimens may have a rounded bit as seen on Plate 26*b*. Not a sufficient quantity was found to subdivide them into categories and make meaningful measurements.

### Pipes

PLATE 23 *g-j, m*

**CLAY PIPES.**—One complete pipe came from Pu-3, level 12–18 inches (Plate 23*g*). It was 42 mm long, uniformly fired to a brownish buff color, untempered, and possessed a burnished exterior. It had been made by modeling. The bowl, off-set from a straight line with the stem by 10°, is 17 mm in diameter outside, 12 mm in diameter inside, and is 19 mm long. The bowl is 17 mm deep. The stem is 8 mm in diameter with a circular hole 1 mm in size as it enters the bowl and 4 mm in diameter at the mouthpiece. There is no decoration, no elaborated bit to the stem, and no evidence of teeth abrasion on the stem at the bit.

In contrast to the pipe above, a fragment found at Le-1 is tan in color, completely fired, without temper and the smooth interior of bowl and stem suggests modeling as the method of manufacture (Plate 23*l*). The height and size of the bowl cannot be reconstructed because of the point of breakage. The bowl wall is 4 mm thick, the exterior is burnished and provided with clay hemispheres 9 mm in diameter, 2 mm high, and 6 mm apart. At the base of the bowl is a truncated cylinder 12 mm in diameter, 5 mm high, and in the center of it is a small hemisphere 4 mm in diameter. The stem is 7 mm long. At the base of the bowl the circular stem hole is 6 mm in diameter but this expands to 12 mm at the outside of the short stem. The tapered conical hole obviously acted as the receptical for insertion of a removable stem, the outside diameter of which is 15 mm. The stem also has evenly spaced, low circular striations near its opening into the bowl. This pipe resembles the so-called "Cherokee" type.

The recovered bowl and stem fragments will be described and designated by the site from which they came.

*Wg-10.*—A brownish, uniformly fired, slightly tapered stem fragment 24 mm long. It is circular in cross-section, the clay is not tempered and the surface is burnished. The hole is eccentrically placed, 7 mm in diameter, with parallel sides.

*My-8.*—A brownish, uniformly fired, tapered stem

with an eccentric hole 3 mm in diameter (Plate 23*h*). The tapering is from 17 mm near the bowl end to 10 mm at the mouth-piece. There has been no modification to form a bit. The clay is untempered and the exterior burnished.

*Sm-26.*—A 35 mm stem fragment, circular in cross-section and tapering to a flaring bit (Plate 23*i*). The hole is centrally placed, 5 mm in diameter, with parallel sides. It is untempered, not burnished, and has an oxidized exterior. The zone surrounding the hole is reduced.

*Le-17A, Level 6 to 12 inches* (Plate 23*j*): A 20-mm stem fragment of brownish black color with a centrally placed hole 4 mm in diameter and with parallel sides. The stem decreases from 19 mm in diameter at one end to 14 mm at the bit. The exterior has a sandy feel and is marked in the following manner: three shallow incisions run the length of the stem and associated with these is a V-shaped incision with the angle at the bit. There is also a row of shallow, equally spaced, twin indentation about 1 mm in size.

*Sm-25.*—Stem fragment similar to My-8.

*Pu-3, Level 18 to 24 inches.*—A bowl fragment with a smooth exterior.

*Sm-5, Level 0 to 6 inches.*—A bowl fragment with limestone as temper. The exterior is burnished and flares outwards.

*My-5.*—A bowl fragment with a smooth exterior and straight rim. The wall has been oxidized on the exterior for a thickness of 1 mm.

*Sm-4, Level 6 to 12 inches.*—Burnished, tapered stem with no temper. Similar to My-8.

*Sm-10B, Level 0 to 6 inches.*—Small bowl fragment with burnished exterior, no temper, straight rim, and rounded lip.

**STONE PIPES.**—At Wg-11 one-half of a longitudinally split pipe of a pale green stone of unknown type was recovered from the surface (Plate 23*m*). It is tear-drop or penis-shaped in contour and the external and internal surfaces are highly polished. The lip of the bowl is flat with a rounded outer edge, 4 mm thick. The vertical height is 47 mm, and just above the stem hole it is 32 mm in diameter. The bowl and stem meet at an angle of 100° to 110°. The tapered stem hole, flush with the exterior of the pipe, is 17 mm in diameter. This was for the insertion of a removable stem. The bottom of the pipe is flattened and roughened as if it had been placed on an abrading surface after manufacture and while in use.

*Gy-1.*—This is a fragment of a steatite bowl with a wall 8 mm thick, has a rounded lip, and the bowl cavity was excavated by vertical incisions from top to bottom. The exterior has been scraped, and then an unsuccessful attempt was made to obliterate the scrapmarks. No stem or bottom remains on the fragment.

*Gy-10, Square B, Layer C.*—Three segments of a single massive, soft, soapy-feeling soapstone pipe were found here. As reconstructed, the pipe is square in cross-section through the bowl with a maximum exterior diameter of 50 mm at the lip. It was over 65 mm tall, the height of the remaining portion. The exterior had been scraped smooth and decorated by transverse incisions on the roundish angles. Short incisions run from top to bottom of the bowl. The interior has been dug out by long, vertical crudely executed strokes with some type of gouging tool. The lip is rounded and the wall is irregular in thickness at the lip. At the base, the wall is 25 mm thick.

Stone pipes with platform bases and carved effigies typical of Hopewellian provenience were seen in private collections and have been reported in the literature from this area, but none were found during the survey.

## Scrapers

## PLATE 28

Scrapers were not easy to classify. At Eva in Tennessee (Lewis and Lewis, 1961, pp. 47–48) such terms as “uniface,” “trapezoid,” “uniface, ovoid,” “uniface, utilized flakes,” “biface, circular,” etc. are used. Coe (1964, pp. 73–79) from material in North Carolina has three types of “end-scrapers,” three types of “side scrapers” and additional “pointed scrapers” and “oval scrapers.” Miller (1962, pp. 71–78), with his specimens from Virginia and North Carolina describes no less than 19 varieties. Presumably these divisions have, or will have with the accumulation of archeological knowledge, cultural and/or temporal meaning. On the other hand they may have no cultural or temporal meaning at all and be purely a descriptive device. It is with these uncertainties in mind that the following scraper types were established.

**BIFACE SCRAPERS.**—These have been modified on both faces by pressure flaking. Some appear to be the blades of reworked projectile points. The shape of these is more definitely oval or triangular than the uniface variety, and the edges around the periphery are sharp.

Overall length: Average 3.1 cm; range 2.0–4.0 cm.

Width: Average 2.5 cm; range 1.7–3.9 cm.

Thickness: Average 0.9 cm; range 0.5–1.4 cm.

Material: Chert.

**HAFTED END-SCRAPERS.**—These have stems or side-notches, presumably for hafting, and were probably fashioned from reworked projectile points. The end, used for scraping and opposite the stemmed part, is steeply beveled and is either straight or excurvate. The stem may be either parallel-sided or, as said above, sidenotched. Two groups emerged, one in

which the length of the scraping element is narrow (Plate 28 *a–c*), and the other in which it is long (Plate 28*d*). Hafting the first group would have produced a stable scraper because of the low fulcrum ratio.

Chipping is by pressure with random removal of flakes from the scraping end as well as the blade and stems. The scraping edges have well-developed hinge fractures on the beveled face in such a way the force that caused them passed from the nonbeveled to the beveled face. The amount of fracturing would not suggest use on skins, although this could have been done also, but against sufficiently resistant material to cause hinge fracture, e.g., wood or bone.

Hafted end-scrapers with narrow blades measure:

Overall length: Average 1.9 cm; range 1.5–2.6 cm.

Width of blade: Average 2.2 cm; range 1.7–3.0 cm.

Length of blade: Average 0.9 cm; range 0.7–1.0 cm.

Material: Chert.

This group of scrapers is not described at Eva (Lewis and Lewis, 1961) and in Coe's (1964) and Miller's (1962) reports. They are also not found in the Stanfield-Worley Bluff Shelter in Alabama (DeJarnette, Kurjack, and Cambron, 1962). The scrapers reported for the Hamilton Focus at Hiwassee Island (Lewis and Kneberg, 1946, p. 112, fig. 65*d*) are somewhat similar but longer. They are, however, not uncommon on Archaic sites in the Upper Ohio Valley and in New York. Dragoo (1959, p. 231, fig. 34) illustrates examples from the McCain Site, Mayer-Oakes (1955, p. 54, pl. 10, C, right hand three specimens) relates similar specimens to the Archaic at Site 36*Fol* and Ritchie (1944, p. 254, pl. 122, fig. 15) finds them in both the Brewerton Focus of the Laurentian Aspect and in Lamoka in New York (op. cit., p. 294, pl. 154, fig. 30).

Hafted end-scrapers with long blades measure:

Overall length: Average 3.3 cm; range 2.7–3.9 cm.

Width of blade: Average 2.3 cm; range 2.2–2.6 cm.

Length of blade: Average 2.3 cm; range 1.6–3.0 cm.

Material: Chert.

This group probably is represented at Eva (Lewis and Lewis, 1961, p. 49, pl. 21) and at Hiwassee Island (Lewis and Kneberg, 1946, p. 112, pl. 65*d*) where they are a part of the Hamilton Focus, indicating a long tradition in Tennessee. This contrasts with the narrow blade type in that they seem to be limited temporally to the Archaic and regionally to the area north of southwest Virginia.

**LAMELLAR FLAKE SCRAPERS.**—These scrapers, separated from the uniface scrapers, were made from a long thin flake whose thickness averaged 0.4 cm and had a range of 0.3–0.5 cm (Plate 28 *q–x*). Several of these were accompanied either by a graving spur or the removal of flakes from one side at the beveled end

to produce a side- as well as an end-scraper. In addition to gravers, they have also been referred to as utilized flakes in the descriptive section (pp. 5-46).

**UNIFACE SCRAPERS.**—One face is flat and unmodified, the other is irregular from random removal of flakes by percussion. The edge of one end, wider than the opposite end, has been steeply beveled by pressure flaking (Plate 28 *g-l*). The opposite end may be the original stone or may have been brought to an angular or rounded contour, producing what has been classified as oval- or triangular-shaped scrapers.

Overall length: Average 3.4 cm; range 2.0-5.5 cm.

Width of scraping end: Average 2.6 cm; range 1.9-3.3 cm.

Thickness: Average 0.9 cm; range 0.5-1.4 cm.

Material: Chert and quartz in order of preference.

**SHELL SCRAPERS.**—The serrated edge of thick *Cyclonaias tuberculata* was possibly used for scraping the interior of pottery vessels during manufacture. The serrations are generally regularly spaced 1 to 2 mm apart and 1 mm deep.

#### Shredders

These items have been described by Winters (1963, p. 12, fig. 22a) as "irregular flakes or cores which have one steeply keeled face chipped to a straight, toothed edge." The examples from the survey area show the steeply keeled face, but the edges on which the teeth occur may be either straight or curved. To produce the spiked effect, relatively broad flakes have been removed from the face with the steep bevel. The face opposite the beveled edge is flat. There are usually only one to three teeth produced. Hinge fractures do not occur on the concavities between or on the teeth.

Length: Average 5.3 cm; range 4.8-6.2 cm.

Width: Average 2.1 cm; range 1.8-3.1 cm.

Thickness: Average 0.5 cm; range 0.4-0.7 cm.

#### Spokeshaves

PLATES 20*d*, 28 *m-p*

**BONE SPOKESHAVES OR BEAMERS.**—Both the term "spokeshave" and "beamer" have been applied to the items classified under this heading. The artifacts are the proximal ends of two deer cannon bones, broken in half and found at Pu-3, Level 12-18 inches, and Pu-9, Level 6-12 inches. The surface opposite the median groove has had the dense cortex worn away into the marrow cavity by longitudinal abrasion. The result is a sharp edge formed on both sides of the abraded cavity with one edge sharper and thinner than the other. Three or four centimeters of unworked bone at the end of the bones remains for a handle or grip. The contours of the worked surfaces are wide arcs. It is assumed that

the complete tool broke near the middle of the bone due to weakness from loss of cortex and from force applied during use (Plate 20*d*).

These artifacts have a wide geographical range and their temporal associations are late. Mayer-Oakes (1955, fig. 25*v*) places them in the Late Prehistoric Monongahela Complex in the Upper Ohio Valley. In New York (Ritchie, 1944, pl. 63, fig. 14; pl. 28, fig. 47) they are associated with the Point Peninsula and Owasco Aspects. Miller (1962, pl. 69, fig. *v*), in North Carolina, illustrates one from 44Mc14, a site that appears to be late in the chain of occupation in the Buggs Island Reservoir in Virginia. They were abundant at the Keyser Farm site in northern Virginia (Manson, MacCord, and Griffin, 1943, p. 369).

**STONE SPOKESHAVES.**—These uniface, notched, side scrapers have been called "spokeshaves" presumably on the basis of analogy with iron tools, which do not have this shape but do have the function of removing shavings from wood to form elliptical or rounded staves. The unusually deep notch would not allow the tool to be used as a scraper to remove hair and fat from skins, and instead suggests their use to trim or smooth a round shaft. Four of these objects were identified (Plate 28 *m-p*) and have these characteristics: They are made from both lamellar and free flakes. They are flat on one face and highly irregular on the other. One edge has been identified in the middle or at one end by pressure flaking. They are from 3.8 to 5.6 cm long, 1.9 to 3.5 cm wide at the point of greatest width, and 0.5 to 0.9 cm thick. The concavity of the tool varies from 1.3 to 1.7 cm wide and from 0.3 to 0.8 cm deep. These notches form arcs by having had chips removed from one face on the majority or both faces on the minority. Microscopic inspection shows minute hinge fractures on the edge of the arc. All are chert.

These objects are of considerable age in the eastern United States having been found in archeological sequences in association with Dalton points in Alabama at the Stanfield Worley Bluff Shelter (DeJarnette, Kurjack, and Cambron, 1962, p. 85, fig. 40). Miller (1962, pls. 5, 25, 28) illustrates them from the Roanoke River basin in North Carolina and his text tends to relate them to the Paleo-Indian Period (op. cit. 44Mc72, 44Mc75, pp. 31-32). Coe (1964) does not find them in his excavations in North Carolina. They have considerable history through time and space, however, which needs to be recognized.

#### Spoons of Clay

PLATE 23

These are called "spoons" by analogy with wooden and metal objects in European culture used for dip-

ping, stirring, and eating from larger utensils. Miller (1962, pl. 58B) called them "dippers" as well as "spoons" and his three specimens, labeled "b," "c," and "d" (op. cit.), resemble the almost complete examples of the fragments described below. These objects have not been reported to the north of the survey area. The fragments will be described by site.

*Pu-3, Level 12-18 inches.*—The bowl and fragment of the stem is made of untempered, micaceous clay, completely oxidized. It has been modeled to shape and has an oval cupping portion 3.1 by 2.4 by 1.4 cm in size for the external dimensions. The handle is circular in cross-section, 1.2 cm in diameter, but is broken 0.9 cm from the cup. The capacity is about 1 to 1.5 teaspoonsful. There are no decorative attempts.

*Sm-10B, Level 6-12 inches.*—This is a 2.0-cm handle, circular in cross-section, and comes to a point at the distal end. There is no temper and the clay has been completely oxidized.

*Wg-11.*—This is a handle segment with Radford Series pottery characteristics.

*He-2.*—Fragment of a cup segment, as reconstructed, is about the same shape and size as from Pu-3, Level 13-24 inches.

#### Unclassified Worked Objects

**BONE.**—Short, that is 2.0 to 4.0 cm long, segments of bone with rounded ends, one of which had been split lengthwise, were found at Gy-10, Layer C, and at Sm-22. These are of unknown use but may possibly be classified as punches or flakers.

**STONE.**—Broken fragments of shaped items with signs of use, but so mutilated they could not be assigned to a definite category. They probably belonged to knives, scrapers, gouges, or drills.

#### TEMPORAL ASSESSMENT OF SELECTED ARTIFACT TYPES

An attempt is made here to find the temporal position of certain artifact types of frequent occurrence as found in the data provided under each site description. These are drills of Types I, II, III, and "I"; backed and unbacked knives; uniface, biface, and hafted scrapers; hand choppers; stone and pottery disks; and used lamellar flakes. The sites are divided into two groups, those with pottery and those without, on the assumption that ceramic sites will relate to the Woodland and later periods, such as Mississippian, and the nonceramic sites will relate to the prior Archaic occupations. The question of reoccupation was kept in mind at all times, i.e., the possibility of

TABLE C.—Relationship of selected artifacts to ceramic and nonceramic sites

Artifacts	Number of ceramic sites	Number of nonceramic sites
Drills, Type I	13	6
Drills, Type II	10	1
Drills, Type III	3	7
Drills, Type I	10	0
Unbacked knives	40	35
Backed knives	36	38
Uniface scrapers	13	17
Biface scrapers	7	10
Hafted scrapers	4	10
Hand choppers	4	19
Stone and pottery disks	18	0
Used lamellar flakes	27	22

material of the first group being mixed with the second. Since all of the sites except Gy-10, are open sites and the material was collected from the surface, excavated sites are treated as if their material came, as a unit, from the surface. If a site has both a surface and excavated collection, they are combined and treated as a unit. Two or more surface collections from the same site are also treated as one. The only productive site data eliminated from this analysis are that from Gy-10 which is a rockshelter. Furthermore the analysis is on a one-to-one basis, that is, if there are several samples of an artifact type from a single site, e.g. three unbacked knives, they are counted only once, not three times. The results are given in Table C.

It will be seen from Table C that all stone and pottery disks, all Type I-drills, and all Type II drills, with a single exception, are found on ceramic sites. This suggests that these artifacts have a late occurrence, a fact already known for the disks (p. 98). Type I drills are twice as frequent on ceramic sites, suggesting a similar late occurrence for them. On the other hand Type III drills are more frequent on nonceramic sites, an occurrence that relates them more closely to the older periods. Unbacked knives, backed knives, uniface scrapers, biface scrapers, and used lamellar flakes are equally divided in their associations between ceramic and nonceramic sites. These are undoubtedly classes of tools whose characteristics persisted during a long cultural continuity. The two remaining selected artifacts, hafted scrapers and hand choppers, are more frequent on nonceramic sites. This suggests that they are related to an Archaic Period and the four associations with ceramic sites are the product of resettlement on an older site.



# Analysis of Flakes

The analysis of stone flakes from the manufacture of artifacts is becoming more and more an essential part of archeological data processing, a factor not present 25 years ago (cf. Lewis and Lewis, 1961, p. 25). They are not only among the most numerous of artifacts but also are amenable to a wide variety of analyses, one of which reflects the techniques used in manufacturing scrapers, projectile points, choppers, and knives (cf. Witthoft, 1953, pp. 473-474; White, 1963). Since the material collected by the survey was not limited to a distinct cultural component this type of analysis was not attempted. Flakes can also be used to show changes in cultural preference through time, which was successfully done with material collected during a survey of northwest Virginia where the earliest groups showed a preference for quartzite and later ones for chert (Holland, 1960, pp. 65-74).

Flakes that had been picked up on each site or from the excavations were examined for signs of use. The lamellar flakes, blades, knives, scrapers and all that showed use were typed. The other flakes were the product of both pressure and percussion techniques of manufacture of artifacts and totaled 21,654 flakes. The number at each site was highly variable. At some sites there were none, while 715 were recovered at site Le-13. In order to derive quantitative proportions of the various rock types a minimum of 10 flakes was used in computing percentages; any smaller amount was discarded as an invalid sample. The sites, number of flakes, and percentages are tabulated in Appendix Table 2.

The sorting was done on a macroscopic basis, dividing the flakes into the following categories: chert and chalcedony as a single group, quartz, quartzite, ferruginous sandstone, rhyolite, and other stone types. Notes were made on each site's collection regarding color of the classes of stone, presence of inclusions such as ooliths, whether the quartz was crystalline or milky, etc. These observations, however,

proved to be of little value since there was a continuum that could not be pinpointed either geographically, geologically, or culturally.

As noted previously, the survey area may be divided into two distinct geological provinces (Figure 41): (1) the Blue Ridge Mountains and the Piedmont Uplands on the east; and (2) the Appalachian Valley and Highland Provinces to the west. The eastern region contains the oldest rocks, consisting of granite, gneiss, steatite, shale, and strata of quartz. The western edge of this geological province parallels the western edge of the political boundaries of Grayson, Carroll, and Floyd Counties. West of this line of demarcation is the Appalachian Valley, and still further west is the Highland Province, both laid down in the Paleozoic from Early Cambrian to the Permian Eras. During the 43 epochs that have been distinguished in the area, the main processes have been deposition of clastic sediments or sediments of calcium and/or magnesium carbonates in the various Paleozoic seas as the land rose and fell numerous times. Not all the recognizable formations are of archeological interest but those which appear applicable to the archeological problems will be mentioned later.

## Chert

There are nine formations containing chert in the Valley and Highland Geological Provinces that have been described in the literature (Butts, 1940): Coconocheaque, Beekmantown, Copper Ridge, Heiderberg, Lenoir, Murfreesboro, Onondaga, St. Louis, and Ste. Genevieve. The Coconocheaque formation is described only from Smyth County where the chert is found in association with sandstone on a surface slope 6 miles southwest of Marion. The Beekmantown formation, composed of both limestone and dolomite in Smyth and Russell Counties has one to five foot strata of chert but no description of the chert has been provided. Copper Ridge dolomite in



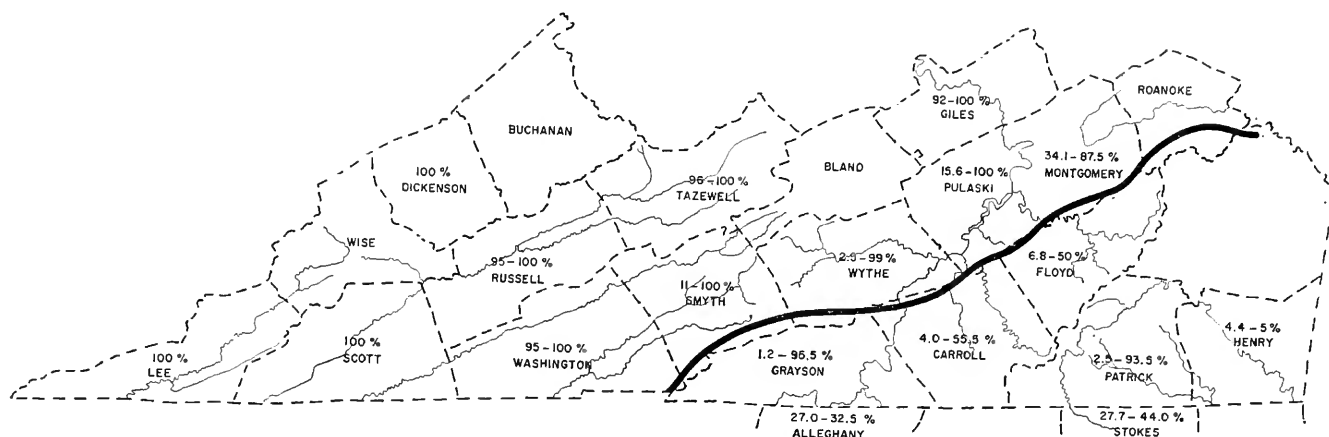


FIGURE 41.—Lowest and highest percentages of chert on sites by counties. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east.

Smyth County contains nodules of black chert. In Wise and Lee Counties the Heiderberg formation contains both black and white cherts, some of the white chert being fossiliferous, and both are apparently nodular. Although the chert in the Lenoir limestone is black in Augusta County, northeast of the survey area, it is not described as such in Russell and Smyth Counties where the formation appears at the surface, but rather as "spongy, *Orospira* plentiful" and as "dense, jagged, soft, cavernous" (op. cit., p. 108). It is also nodular. In Giles, Lee, Russell, and Tazewell Counties the Murfreesboro limestone contains blocky, nodular, and bands of chert. The same Onondaga formation that figures so prominently as a producer of chert for manufacture of implements in New York State is found in Bland, Lee, Roanoke, Smyth, Washington, and Wise Counties where it contains solid beds of chert 10 to about 50 feet thick. Some of the beds of the St. Louis limestone are marked by abundant nodules, plates, and stringers of black chert, and strata of this limestone with chert nodules may be as thick as 140 feet. This formation was identified in Giles, Tazewell, and Wise Counties. The last formation containing chert is the Ste. Genevieve that was identified in Scott, Tazewell, and Washington Counties. Apparently the chert of this formation is nodular and black.

The majority of the chert flakes picked up on archeological sites varied from a light grey to black. Until there is a better description of the cherts from the various geological formations, however, the archeological material cannot be assigned to a specific formation. Looking forward to the time when it might be possible to relate the archeological material to the geological formations the mineralogist of the Geology Department at the University of Virginia, Dr. Richard Mitchell, examined all the material

reported in this section. The grey variety, selected from flakes collected at Wg-13, is described as follows:

**MEGASCOPIC DESCRIPTION.**—Grey subtranslucent chert with a greasy luster and good conchoidal fracture. Carbonate rhombohedrons are evident on close examination. A slight effervescence with hydrochloric acid also indicates the presence of a carbonate mineral, probably calcite. Microscopic description. The chert is composed of a mixture of two main components: (a) microcrystalline quartz grains, and (b) carbonate (mainly calcite). The thin section shows tiny calcite (based on effervescence) rhombohedrons (average size, 0.02 mm) intimately mixed with a slightly predominant microcrystalline granular quartz matrix. The quartz grains average less than 0.01 mm and may be mixed with some opal, although it is not possible to definitely identify the latter. Several larger (up to 2 mm) carbonate rhombohedrons are in the thin section. For the most part these are nearly completely replaced by quartz (average grain size, 0.1 mm). Because some of the larger rhombohedrons have been selectively replaced along their borders, or in their cores, it is believed these are dolomite rather than calcite, which is the composition of the smaller rhombohedrons. Also the smaller calcite rhombohedrons are present as inclusions in the replaced dolomite rhombohedrons. Chalcedonic quartz fibers fill one lenticular area in the thin section measuring 0.1 mm by 0.8 mm.

The black chert has this description:

**MEGASOPIG DESCRIPTION.**—A black opaque chert with a greasy luster and pronounced conchoidal fracture. A few tiny inclusions with rhombohedral shape are visible with a hand lens. Microscopic description. Essentially the rock is an intimate mixture of microcrystalline quartz and opal grains. The individual grains average less than 0.01 mm. Under crossed nicols the microcrystalline quartz shows undulatory extinction while the opal is isotropic. Slight variations in the rock color are related to different ratios of the opal-quartz components. The opal-rich areas tend to be darker in color. Very conspicuous throughout the rock are carbonate rhombohedrons. Several of these are over 0.5 mm across, but most numerous are tiny rhombohedrons which measure as little as 0.002 mm. There has been selective replacement of the carbonate by quartz in some cases; some are completely replaced to form pseudomorphs consisting of interlocking quartz grains (grains about 0.02 mm). These replacement features are

indicative of original dolomite. A couple of narrow veins, less than 0.2 mm wide, cross part of the thin section. These are filled with carbonate and minor quartz grains. A few black inclusions, presumably carbonaceous matter, are in the section. These are numerous enough to account for the black color of the rock, which is probably due to an organic stain absorbed by the minute quartz and opal particles.

The geological literature had indicated that there was only chert in the formations already described and as a consequence when very small quantities of chalcedony appeared in the collections of flakes these were relegated to the chert category. At the completion of sorting, after most of the flakes had been discarded, a review of the notes on the collections and conversation with Dr. Mitchell indicated chalcedony had not been reported from the area and may be of importance to future archeological studies. The material is highly translucent, grading toward a light grey. From the notes it was found to have its highest incidence in Montgomery and Pulaski Counties, centering on New River. Minor quantities turned up in adjacent counties to the south and west, but did not occur in Lee, Scott, Washington, or Wise Counties, nor was it found on sites in the Blue Ridge or Piedmont Uplands. Its northern extension cannot be defined because the survey did not enter the counties north of Montgomery except for a single site in Roanoke County where none was found. Further north, however, in Alleghany, Bath, and Highland Counties, no stone artifact of this type of chalcedony was found on any of the sites (Holland, 1960; n.d.). The mineralogical characteristics of the grey and translucent varieties are, respectively, as follows:

A grey variety of chalcedony from Ru-1:

**MICROSCOPIC DESCRIPTION.**—The overall grain size of the rock is so small (less than 0.001 mm) it is difficult to determine with certainty the state of the silica. However, from evidence based on a few larger grains, it seems to be a mixture of microcrystalline quartz and opal with appreciable chalcedony. The chalcedony is especially noticeable where it occurs in veins and patches (0.5 mm across), which in some cases appear to be fossil structures. Very abundant pseudomorphs of limonite after a carbonate (in the form of rhombohedrons) occur in the rock. These are very small, although some range up to 0.04 mm. In addition to the brown rhombohedrons, the "dirty" appearance of the rock is also contributed to be stains along many minute fractures, and to the apparent adsorption of stain by the microscopic grains. Although a tiny amount of interstitial carbonate was observed, it is extremely minor.

Chalcedony from Pu-3:

**MEGASCOPIC DESCRIPTION.**—Translucent gray chalcedony with a waxy luster and good conchoidal fracture. (There is some uncertainty in this hand specimen belongs to the thin section numbered Pu-3, but the rock types are in agreement.)

**MICROSCOPIC DESCRIPTION.**—This rock is composed primarily of fibrous chalcedony sheaves and spherulites. Along one edge of the thin section these spherulites (up to 0.4 mm diameter) are especially well developed. In the remainder of the thin section

the chalcedony is much finer and is mixed with extremely tiny microcrystalline granular quartz and some opal. The microcrystalline granular quartz has an undulatory extinction, making it difficult to distinguish from fibrous chalcedony. In overall appearance the thin section has a mosaic appearance with larger (less than 0.1 mm) areas of rhomboid shape in a much finer matrix. This is evidence that the rock formed from replacement of an earlier carbonate rock which contained a rhombohedral carbonate mineral, e.g., limestone. On one edge of the slide there is some carbonate, including rhombohedrons (0.05 mm across). Some rhombohedrons are replaced by brown limonite which indicates the original carbonate may have been iron-bearing, e.g., ferroan dolomite or ankerite. Also in the slide are tiny specks (less than 0.001 mm) of an opaque material which could not be identified because of size.

In order to obtain a concept of the geographical distribution of the two main rock types of chert and quartz, and since the number of flakes varied so widely on individual sites, it was decided to represent these in consolidated percentages as they occurred on sites in each county without regard to time or cultural factors. Therefore on the two maps, one showing chert (Figure 41), the other quartz (Figure 42), the percentages are given with the lowest percentage first and highest percentage next, separated by a hyphen. For example, in Russell County chert flakes constituted 95 to 100 percent of all rock types on the sites surveyed. On the other hand in this same county the percentages of quartz varied from 0.0 to 1.0 percent.

The geologically described range of formations carrying chert are in Bland, Giles, Lee, Roanoke, Russell, Smyth, Tazewell, Washington, and Wise Counties where it appears as either strata, or more commonly as nodules. The nodular variety is the only form identified on aboriginal sites. The extremely weathered exteriors of nodules remained on many items (Plate 24j), even on finished points and knives (Plates 16 a-c, 27 j, k).

Aboriginally, chert was in use over the entire survey area, but its highest frequency of use was at its geological source. It constituted 100 percent of the stone in use throughout the millenia of occupation in Lee, Dickenson, Scott Counties, and presumably intermediate Wise County for which there was an inadequate sample. These counties are in the extreme southwestern range of the survey area and are the areas with chert-bearing formations given above. Extending from them to the northeast are Giles, Russell, Tazewell, and Washington Counties (Bland and Buchanan were not surveyed) showing 92 to 100 percent use of chert, also in the area of chert-bearing formations. This less than exclusive use of chert is due to the availability of ferruginous sandstone and quartzite that occur naturally in strata through or near these counties, as well as to a small percentage of quartz.

East of these counties are Smyth, Wythe, Pulaski,

and Montgomery Counties that are just west of the boundary between the Blue Ridge Mountain-Piedmont Uplands Geologic Province and the Appalachian Valley and Highlands Provinces. Here are marked percentage fluctuations in the use of chert undoubtedly in part a reflection of the geologic situation. For example, the percentage of chert flakes on sites in Smyth County varied between 11 and 100 percent, in Wythe County between 2.5 and 99 percent, in Pulaski County between 15.6 and 100 percent, in Montgomery County between 34.1 and 87.5 percent. These results are parallel to a previous study of lithic materials made by Michael (1963, p. 35) in Wythe County.

Moving eastwards, the adjacent counties of Grayson, Carroll, and Floyd, are all within the Blue Ridge-Piedmont Uplands Geologic Province, but they border on the younger Appalachian Valley Province. Stone types in these counties reflect a similar mixture of stone industries that have been demonstrated immediately to the west, but here the proportions of chert become smaller. For example, sites in Grayson County have chert from 1.2 to 95.5 percent, Carroll County from 4.0 to 55.5 percent, and Floyd from 6.8 to 50 percent. Here, however, a temporal distinction in the use of stone shows clearly. Archaic sites such as Gy-2, Ca-3, and Fd-5, to mention but three, have very little chert, their use percentages being 1.2 to 5.7 percent, 4.0 percent and 6.8 percent, respectively. In this area the trend through time is toward a greater use of chert and may be illustrated by the flakes recovered at Site Gy-10 in Square C.

<i>Depth (inches)</i>	<i>Percentage of chert</i>	<i>Percentage of quartz</i>	<i>Number of flakes</i>
0-3	—	—	none
3-9	85.5	14.5	81
9-15	91.0	9.0	91
15-21	79.0	17.6	88
21-27	31.6	67.6	130
27-33	54.0	46.0	13

In Patrick and Henry Counties, on the eastern slope of the Blue Ridge Mountains and on the Piedmont Uplands where chert does not occur naturally, every site has some flakes of chert, and three, Pk-3, Pk-18, and Pk-24 range between 76.5 to 93.5 percent. This is an indication of considerable transmontane transport from the western to the eastern side of the mountains.

#### Quartz

Areheologically quartz is mainly of the milky or white variety, although occasional flakes are partially clear and some are crystal. Geologically these varieties occur naturally in the Blue Ridge Mountains and

Piedmont Uplands, on ridges and in the valleys as strata, but in the streams it is mainly float. West of the demarcation between the Appalachian Valley and the Blue Ridge Provinces the natural occurrence is probably float from streams, like Little River arising in the Blue Ridge, and the New River. In Wise County, the Cayugan formation, composed of sandstone, has some pebbles of quartz (Butts, 1940, p. 259). From Solecki's Site 46 Su 20 in West Virginia (1948, p. 386), only four white quartz flakes and pebbles were in the entire collection.

The distribution of quartz flakes is a partial antithesis of chert (Figure 42). The highest incidence of use is where the stone is readily available, namely in the Blue Ridge Mountains-Piedmont Uplands Geologic Province. For example, in Henry County the presence of quartz flakes was 91.2 to 95 percent, in Patrick 5.4 to 97.5 percent, in Carroll 38.2 to 100 percent, in Floyd from 28.5 to 100 percent, and in Grayson 4.5 to 97.5 percent. West of the demarcation line between the Blue Ridge Mountains-Piedmont Uplands Province, that is in the Appalachian Valley Province the percentages drop sharply: in Smyth County 0.0 to 18.0 percent, Wythe 2.0 to 25.8 percent, Pulaski 0.0 to 37.5 percent, and Montgomery 6.0 to 50 percent. Further westward the percentages are almost negligible, ranging from none to a maximum 8 percent. In the far southwestern counties chert was the only stone in use.

#### Ferruginous Sandstone

Geologically, ferruginous sandstone of the type having archeological importance belongs to the Clinton formation. Its characteristics have been described by Butts (1940, p. 243):

The Iron Gate facies is composed in its lower (Cacapon) division of shale and grey sandstone of the type predominant in the Cumberland facies, with several beds of its distinctive iron sandstone, 2 to 30 feet thick in one place or another, distributed through its full thickness. This iron sandstone is composed almost entirely of quartz grains a millimeter or less in diameter coated with iron oxide which also fills all interstices between the quartz grains. It is a dull brownish red; not so brightly colored as the red shale that occurs locally in the Clinton, as described beyond. The rock generally contains clay balls, mostly grey, from the size of a pin head to more than an inch in diameter but prevailing of intermediate size. It is rarely fossiliferous, but *Camarotoechia*, *Calymene* and ostracodes have been observed. The iron content makes the rock notably heavier than typical sandstone. It is estimated that iron oxide may constitute 10 to 15 per cent of the rock, equivalent to about 10 per cent metallic iron as an average. None of this sandstone, therefore, may be regarded as iron ore. At Cresaptown, Maryland, a similar bed yields samples that contain 24 per cent iron. This type of sandstone is distinctive of this local Cacapon division. Being very hard and resistant to disintegration, it is widely distributed on all surfaces on which the Cacapon division crops out and on the slopes of the ridges below, as well

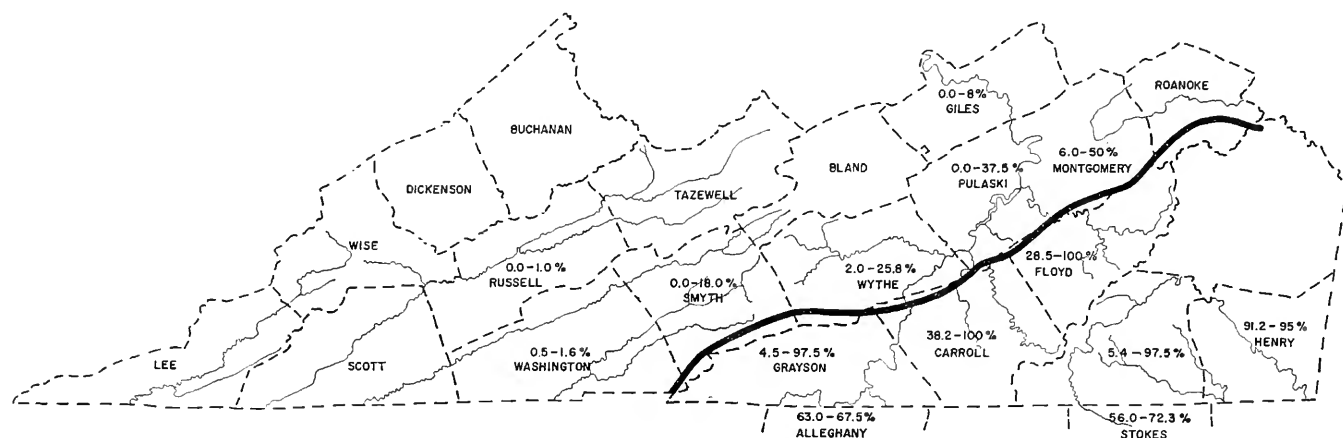


FIGURE 42.—Lowest and highest percentages of quartz on sites by counties. Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east.

as along streams crossing its outcrop. Its float serves to indicate without ascent the presence of the basal Clinton on high knobs and ridges, as, for example, House mountains west of Lexington. This type of sandstone is generally absent from the Cumberland facies, but a bed of it lies at the very base at and northeast of Cumberland, Maryland. Possibly the Cresaptown "ore" in the Cumberland section is of that type. In central Pennsylvania only a comparatively thin bed of it is found at the very bottom of the Clinton. Southwest of New River no such sandstone has been observed in the Clinton. The Cumberland facies prevails throughout the southwestern counties of the State.

The irregular distribution of the Clinton formation has been outlined and shaded on a map (Figure 43). All sites with even a single flake of ferruginous sandstone were plotted on this map as solid black squares. The sites align themselves within three miles or less of the Clinton formation, excepting one, Ca-6, which is about 15 miles from the nearest source. Ca-6 is near but east of New River, which flows northeastwards out of the Blue Ridge Mountains where the Clinton formation does not occur. The presumption is that the deposition of ferruginous sandstone at this point was due to transport by the aboriginal inhabitants. It could not have resulted from the use of float on New River since the material does not occur upstream from this point.

#### Quartzite

Archeologically, two varieties of quartzite were differentiated although geologically they may be the same. One is composed of white quartz grains as if the sand, cemented without stain, had been derived from milky quartz. This type of quartzite contrasts, for example, with those quartzites from the Coastal Plain of Virginia where both stain and arkose granules are prominent features. The second variety is composed of grey sand which may be stained yellowish by per-

miation between the grains of either clay or iron compounds. The source of both these types on the western side of the Blue Ridge Mountains is probably the Erwin quartzites.

Erwin quartzite, south of Roanoke, Virginia, is the equivalent of Antitam sandstone north of this locality. It occurs only along the northwest flank of the Blue Ridge Mountains, is a member of the Chilhowee group, and is one of the basal Cambrian rocks of the Appalachian region. Butts (1940, p. 39) describes it as follows:

The Erwin-Antietam is a quartzose sandstone or quartzite, depending upon the degree of the metamorphism that has affected it from place to place. It is mainly a medium- to fine-grained, moderately thick- to massive-bedded, grey, whitish weathering rock. The main mass of the material appears to have been a thoroughly sorted, clean, white beach sand. The rock resembles the Clinch sandstone. Locally the grains are completely cemented with silica to form a compact quartzite. . . . Weathered exposures and detached masses are commonly light grey. The uppermost part of the formation has a brownish or rusty color due to small blotches of iron oxide scattered through the rock.

In order to determine what relationship, if any, the archeologically deposited quartzite flakes might have to this geological formation, the strata of Erwin quartzite is sketched on a map (Figure 43) and sites with quartzite flakes are plotted as triangles. In the Valley Province, sites from one end of New River to the other had quartzite which, more than likely, was found as float in this river. Other sites, that is those of the Valley Province but not on New River, are located near Erwin quartzite strata, and this could have been the source from which it was obtained.

East of the Blue Ridge Mountains and in the Piedmont Uplands the geological source of quartzites has yet to be identified.

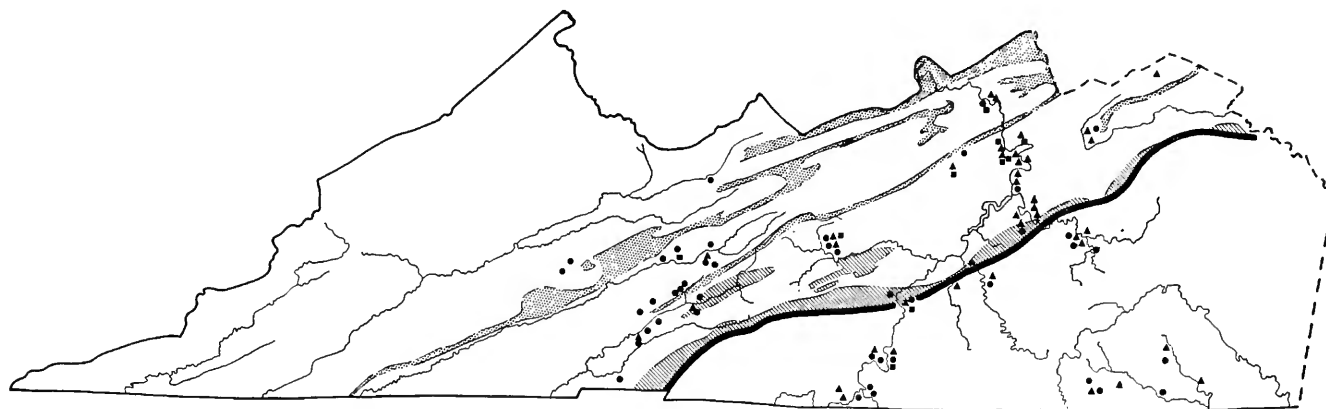


FIGURE 43.—Archeological distribution of sites with one or more flakes of ferruginous sandstone (squares), quartzite (triangles), and rhyolite (circles) with reference to the Clinton formation (dotted area) and Erwin quartzite (parallel lines). Heavy solid line demarks geological Valley Province to west from Blue Ridge Province to east.

### Rhyolite

The Chilhowee group of formations was mentioned under the discussion of quartzite and another member of the group is the Unicoi. It contains at least three distinct sheets of igneous rock of basaltic composition, one of which is 200 feet thick. This amygdaloid rock is easily distinguished by its dark greenish or purplish color, its pink and greenish inclusions, and by its greater heaviness. This is the only geological source described in the survey area which may have been the source of the archeological material sorted out as rhyolite. The mineralogy is as follows:

Although the rock presented for identification is not typical rhyolite, the composition would indicate this rock. The abundance of orthoclase and quartz are important keys to its identification. The presence of feathery chalcedony areas indicates the rock has undergone reorganization since its original formation.

The geographical distribution of archeologically recovered rhyolite closely parallels the distribution of quartz as may be seen on the map (Figure 43), where all the sites which contained one or more flakes of rhyolite have been plotted. This relationship may be seen by comparing Figure 42 with Figure 43. There are several notable exceptions to this, however. Rhyolite was not found more than 20 miles west or north of the line of demarcation between the Appalachian Valley and Blue Ridge Geological Provinces, except in two instances. This distribution coincides with that of the Unicoi formation. The two exceptions are Tz-4 and Gs-4 where a single flake was found on each site. The former must have been a matter of aboriginal transport and the latter either by transport or from float material found in New River.

### Other Stone Types

Jasper, both red and brown varieties, along with a few flakes of unidentified types of stone were recovered and are listed under this heading in Appendix Table 2. A unique situation occurred at Wy-12 where 71.7 percent of the flakes were red jasper but none of the other cultural items were. In the Piedmont Uplands brown jasper may have temporal and geographical meaning but not enough material was found to study it. An example of this is found at Pk-3 (p. 24).

### CULTURAL INTERPRETATIONS

Having ascertained the relationship between the probable sources of raw materials and the distributional patterns of flakes from manufactured stone artifacts, this final step is to identify tentatively the popularity of rock types through time. Projectile points (pp. 84-92), with known temporal proveniences will be used to identify the various periods of time.

In the Paleo-Indian Stage seven of eight Clovis points are of chert and one is of crystal quartz. These have been reported only in the area of high concentration of chert, geologically and archeologically, that is, in the southwestern range of the survey area. The transition between Paleo-Indian and Archaic Stages, as well as the Early Archaic, are represented by too few points such as Hardaway Sidenotched and Dalton to find any definite relationships; however, the few recovered are of chert.

There is a dichotomy of rock-type use in the Middle Archaic Period. All Bifurcated Base, Big Sandy Sidenotched, Lamoka, and most of Morrow

Mountain I points are of chert. Their geographical distribution is mainly in the area where chert is readily available. On the other hand the typical Guilford Lanceolate points are made of quartz, quartzite, and rhyolite but are distributed in the Blue Ridge Mountains and Piedmont Uplands region. The rounded base Guilford Lanceolate points found mainly west of this area are all split in rock type association between chert, quartz, quartzite, and rhyolite.

The Late Archaic, Transitional, and Early Woodland Period points marked by Ledbetter, Savannah River Stemmed, and Potts, respectively, are most frequently made of rhyolite, quartzite, quartz, and

ferruginous sandstone regardless of the geographical location. Triangular styles which followed these show that the groups who made these preferred chert.

In summary, local sources generally provided materials for making projectile points. There are evident changes through time in preferences, however, which may be best studied in the geographical band that represents the transition between the Blue Ridge Mountain and the Appalachian Valley Geological Provinces. Here the evidence points toward the use of rhyolite, quartz, and quartzite as rocks of preference in the Middle and Late Archaic and the Early Woodland groups.

# Conclusions and Interpretations

## ANALYSIS OF SITES

Three types of analysis were conducted on occupied sites, excluding mounds, rockshelters, and caves. The first was to determine the relationship between ceramic and nonceramic sites with reference to a selected group of projectile points ranging in age from Middle Archaic to Late Woodland, Mississippian, or Historic Periods. The second type of analysis attempts to discover what topographic features were used during the various time periods defined by the projectile points. The third is a brief analysis of the types of occupation during the Woodland and later periods.

The relationship between ceramic and nonceramic sites and selected projectile points was conducted in the same manner as already described for the analysis of selected artifact types (p. 105). The projectile points chosen are Clarksville Small Triangular, Madison Triangular, and Levanna Triangular as a group, and Dallas Triangular, Hamilton Triangular, Savannah River Stemmed, typical Guilford Lanceolate, Big Sandy Sidenotched, and Morrow Mountain Stemmed Types I and II. The triangular varieties presumed will be associated with sites of Woodland and later periods while the others will represent Middle to Late Archaic Periods (Table D).

Table D shows that Hamilton and Dallas Triangular points are entirely associated with ceramic sites. The single exception of one Dallas Triangular point on a nonceramic site, Gy-2, can only be explained on a basis of random loss since this group of occupations are Archaic in nature. The sixteen nonceramic sites, with triangular forms other than Hamilton and Dallas Triangular points, are a problem open to three possible explanations. One is random loss; the second is that simple triangular points,

particularly Levanna Triangular which is the earliest of the three types (Table B; p. 93), were introduced before pottery into the survey area; and third, in the seasonal round as a part of the annual life cycle, groups establishing hunting camps did not carry pottery with them. More data will be presented on this problem when the second type of analysis is considered. Certainly the overwhelming evidence is that these point types are associated with ceramic sites.

In the Archaic Period, represented by Savannah River Stemmed, Guilford Lanceolate, Big Sandy Sidenotched, and Morrow Mountain I and II, there is resettlement of sites having these points by later groups with ceramics. The clearest evidence that the points are not associated with pottery is shown by Guilford Lanceolate and Big Sandy Sidenotched where only one each were they found on ceramic sites.

The second type of analysis employed here relates the above-mentioned projectile-point types with the

TABLE D.—*Relationship of selected projectile points to ceramic and nonceramic sites*

<i>Selected projectile points</i>	<i>Number of ceramic sites</i>	<i>Number of nonceramic sites</i>
Clarksville Small Triangular, Madison Triangular, and Levanna Triangular	63	16
Dallas Triangular	23	1
Hamilton Triangular	16	0
Savannah River Stemmed	9	15
Guilford Lanceolate (typical)	1	12
Big Sandy Sidenotched	1	6
Morrow Mountain I	3	8
Morrow Mountain II	9	6

TABLE E.—*Relationship between selected projectile-point types and associated topographic features*

<i>Selected point types</i>	<i>Primary terrace</i>	<i>Secondary terrace</i>	<i>Combined primary and secondary terrace</i>	<i>Tertiary terrace</i>	<i>Ridge summit</i>	<i>Hill slope</i>	<i>Bluff</i>	<i>Plateau</i>	<i>Unknown</i>	<i>Total</i>
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
<i>Ceramic sites</i>										
Clarksville Small Triangular, Madison Triangular, and Levanna Triangular	24 *38	32 51	56 89	— —	— —	2 3	— —	4 8	— —	63 100
Dallas Triangular	6 25	12 50	18 75	— —	1 4	2 8	— —	3 13	— —	24 100
Hamilton Triangular	4 25	10 63	14 88	— —	— —	1 6	— —	1 6	— —	16 100
<i>Nonceramic sites</i>										
Clarksville, Small Triangular, Madison Triangular, and Levanna Triangular	4 25	6 38	10 63	— —	3 19	2 12	1 6	— —	— —	16 100
Savannah River Stemmed	7 29	10 41	17 70	— —	5 21	— —	2 9	— —	— —	24 100
Guilford Lanceolate	1 8	2 15	3 23	— —	8 62	— —	1 8	— —	1 8	13 100
Big Sandy Sidenotched	1 14	2 28	3 42	— —	4 57	— —	— —	— —	— —	7 99
Morrow Mountain I	3 27	5 46	8 73	— —	2 18	1 9	— —	— —	— —	11 100
Morrow Mountain II	3 20	7 46	11 66	1 7	2 13	1 7	— —	1 7	— —	15 100

\*Percentages rounded to nearest whole figure.

topographic features of the sites on which they were found (p. 5). Additionally nonceramic sites with the group of Clarksville Small Triangular, Madison Triangular, and Levanna Triangular points have been separated out and analyzed to compare the pattern of topographic features on which these sites are found with ceramic sites containing the same projectile point types. The topographic features are: primary terrace, secondary terrace, tertiary terrace, summit of a ridge, side of a hill, edge of a bluff, and plateau. These have already been defined (p. 5).

Table E shows that valleys were heavily occupied within the time range defined by the projectile points. The Morrow Mountain II point found on a tertiary terrace at Site Sm-2 is associated with a Palmer Sidenotched and a Ledbetter point, and on the opposite side of Walker Creek is another site, Sm-3, also on a tertiary terrace with a Patrick Indented Base point, believed to be of Archaic manufacture. This suggests that river terraces, especially when placed on ones older than the secondary terraces, may be used to date sites geologically, and archeology can contribute its share to the dating.

Ceramic sites with the various triangular point types were placed on three types of terrain: valley bottomlands, the slopes of hillsides, and the flat land of plateaus. Of these, no less than 75 percent were on bottomlands. The sites are not found on the tops of

ridges nor on the edges of bluffs. The seeming exception to this is the single Dallas Triangular point found on Gy-2 and has been explained as random loss on an archaic site. This 100 percent correlation between ceramic sites in the Woodland and later periods with flat topographic features is most readily explained as the result of a cultural activity. Of various possibilities, the need for suitable land for agriculture is the more obvious explanation.

On the other hand sites of the Middle and Late Archaic Periods represented by Morrow Mountain I and II, Big Sandy Sidenotched, Guilford Lanceolate, and Savannah River Stemmed points are located in the valleys, on ridge tops, and on bluffs, but not on plateaus. The only exception to this is a single Morrow Mountain II point found on a plateau site, Sm-32. The greatest use of ridge tops was in the Middle Archaic Period, represented by sites on which typical Guilford Lanceolate and Big Sandy Sidenotched points were deposited. More than half of the sites were so located, specifically 62 and 57 percent, respectively. The diversity of site locations during the Middle and Late Archaic occupations suggests that they were placed in ecological niches of a forest zone compatible with the needs of a hunting and gathering society.

The nonceramic sites with Clarksville Small Triangular, Madison Triangular, and Levanna Triangular points are listed on Table E in reference to



topographic features in a pattern highly similar to the sites of Middle and Late Archaic provenience. They are found in valleys, on ridge tops and bluffs, but not on plateaus. Of the three possible explanations offered previously to explain the locations of non-ceramic sites on which these points are found it seems more likely that they result from hunting, and probably gathering, activities associated with the annual life cycle of groups in the Woodland and later periods. Ethnohistorically hunting camps are known to be a part of the annual cycle in the Coastal Plain of Virginia (Strachey, 1951, p. 82). They have been located archeologically to the northeast of the survey area in Virginia (Holland, and O'Ryan 1964), and Winters (1963, p. 33) has shown a settlement system in the Late Archaic Riverton Culture in the Wabash Valley of Illinois.

The third type of analysis is a review of the Woodland and later period sites (pp. 6-46) to determine if uniformity or typological divisions could be found in them. One group of sites characteristically is circular in outline and sometimes is raised above the surrounding plain. There are thirteen sites that definitely belong in this group (Gs-6A, Gs-8, My-3, My-8, Pk-17, Pk-21, Ru-1, Ru-3A, Ru-3B, Ru-13, Sm-5, and Sm-9B) and five (Ru-7, Sc-3, Sm-16, Wg-11, and Wg-12) that probably fulfill these criteria. The

circular pattern of the charcoal stained earth suggests that these were villages surrounded by stockades for defensive purposes, and indeed one, My-8, has since been excavated and is known to have this feature (Howard MacCord, personal communication).

Fourteen others (Gy-15, Pk-9, Pk-10, My-9, Sm-7, Sm-8, Sm-19, Pu-10, Wg-1, Wg-16, Wy-3, Wy-5, Wy-8, and My-11) are described as "compact" or "concentrated," descriptive adjectives used during the field work to indicate that there were certain limits over which village debris was scattered. These sites had no clear cut outlines as the group above.

At the other extreme there were eleven sites with no circumscription (Gs-5, Gy-9, My-4A, My-4B, My-5, My-6, My-2, Pk-20, Pu-3, Wy-7). The cultural debris was spread over the topographic feature on which they were placed and the limits were not well defined. The implication is that they were either isolated houses or small villages involving a scattering of houses on the terrain.

We have then at least two contrasting categories of villages, the first and third as analyzed here, during the Woodland and later periods. The first suggests that warfare was common in the survey area. There is not enough data to tell if the second group also began to consolidate because of this cultural activity or not, or if they were surrounded by stockades.

## ABORIGINAL SOUTHWEST VIRGINIA: A CENTER OF DEVELOPMENT OR A CROSSROADS?

Modern Virginia is a Middle Atlantic seaboard state whose territory once extended from the Atlantic to the Pacific Oceans by a grant from the English Crown. The reduction of its territory has confined it geographically to three gross physiographic zones that run parallel in a northeast-southwest direction across the state. These are the tidewater adjacent to the Atlantic Ocean on the east, a Piedmont, and then a mountainous section that includes the Blue Ridge Mountains and parts of the Allegheny Mountains. Virginia, as a colony, was first settled along the tidewater. As the population expanded, it moved west into the Piedmont and eventually into the mountainous area by about A.D. 1750. One of the first North American archeological reports, that of an excavation of a mound by Thomas Jefferson was from the Piedmont, and most subsequent archeological investigations in the state can be correlated with the higher population densities of the tidewater and Piedmont sections. The mountainous area, particularly the southwestern angle formed by the bordering states of

North Carolina, Tennessee, Kentucky, and West Virginia has a low population density, few institutions of higher learning that might promote an intellectual interest in the past, and, as a consequence has been relatively neglected, archeologically speaking.

A majority of the archeological reports from southwest Virginia have been made by the Smithsonian Institution. In contrast, Virginia, until recently, had no official archeological program of any sort, and to this may be added that archeological investigations by individual states are confined unfortunately to their political boundaries. All the states forming the boundries of southwest Virginia have active archeological programs. The tax money is funded for expenditure within the particular state; it is not to be spent in another state even though the archeological problems may cross several state boundaries. With this economic and political situation it is apparent that widespread aboriginal cultural developments will receive only fragmentary investigations and the reports will have to be pieced to-

gether as time passes to get a complete picture of the pre-Columbian aboriginal cultural developments.

Archeological investigations in the State of Virginia as a whole have received only cursory treatment in generalizations about these developments in the eastern United States, if they have been mentioned at all. It is probable that the most widely read report from Virginia is the one noted above by Jefferson dating from about 1780. One could conclude from this situation that either the reports from the state are not sufficiently fundamental to warrant attention, or the generalizations have not been detailed enough to include Virginia, or that the archeological potential is of a low order of interest. The latter has not seemed justified from reports appearing sporadically through the years, particularly those from southwest Virginia. As far back as 1877 the Ely Mound (Carr, 1877) was excavated in Lee County and showed that this area was linked with the Adena-Hopewell centers in the Midwest. In 1894 an excavation at Castle Rock in Giles County (Mercer, 1894) extended to a depth of more than twelve feet and occupation went to a depth of more than eight feet. This was an early demonstration that possible stratigraphy was available. Wedel's 1940 reconnaissance near Saltville (Wedel, 1951) showed that Southern Cult objects of Late Mississippian times were to be found here. Solecki's (1949) survey in Giles County and adjacent West Virginia provided insight into Mississippian cultural influences along New River. To these may be added the fact that loot of southwest Virginia pothunters began to turn up in private collections and drew attention to the region. These were not the ordinary projectile points and axes, but platform pipes, fenestrated shell gorgets, copper celts, conch columellar beads, and pots of various types. It appeared, therefore, that southwest Virginia might not only be an area receiving cultural influences from remote regions but the indigenous populations might be active innovators whose own cultural developments were being exported along trade routes implied by the marine shell (*Busycon*, *Olivella*, and *Marginella*) and copper. These suppositions, however, could only be tested objectively by field investigation. Hence, an application was made to the National Science Foundation for field funds and Grant GS-59 was obtained in 1962, and administered by the Smithsonian Institution with the work controlled by members of its staff.

It is evident that one person, or at most two working as a team, could not in two summer sessions investigate an area of 7,000 square miles in detail. However, 191 village or campsites, 8 rockshelters, 20 caves, 4 mounds, 4 burial cairns, and 2 soapstone quarries were recorded; 21,808 potsherds, 21,654 flakes, 2,060 artifacts mostly of stone but also of shell and

bone, 5,180 animal bones and fragments and 7,550 snail and mussel shells were collected and brought to the laboratory for analysis. These artifacts came mostly from surface collections, limited test pits, and stratigraphic cuts, but some were loaned by local collectors. Also an effort was made in this survey of southwest Virginia to report the data from sites in local collections or information given by those who knew the sites.

The pottery was analyzed into three series of wares based on temper (Dan River: sand temper; New River: shell temper; and Radford: limestone temper) that had already been described in the literature, and into four new series of wares (Grayson: crushed igneous stone temper; Lee: sand temper; Smyth: soapstone temper; and Wythe: sand temper) that had not. If these pottery series yield areal and temporal information their distribution and popularity would have to be plotted on maps and a quantitative method of analysis applied with temporal control provided for the surface collections by the stratigraphic cuts and test pits. As a result of these intense studies what had been previously known as the Southern Allegheny Ceramic Area (Evans, 1955, pp. 103-108) was divided into four sub-areas based on the distribution and popularity of the various pottery series.

The most easterly ceramic sub-area was found in the Piedmont and adjacent Blue Mountains where the predominant pottery series are Dan River and Grayson (pp. 49-51 and 51-58). The evidence points to these two series entering this region from the southeast and south (Figures 6, 13), and that the latter gave way in popularity to the former over a period of about 475 years, or from about A.D. 1200 to 1675 (Figure 7; p. 82). West of this Piedmont Uplands-Blue Ridge Mountains Ceramic Area, in the Appalachian Valley along the Roanoke, New, and Forks of the Holston Rivers, a new combination of pottery traits appeared. The most popular and widespread were the Radford Series (Evans, 1955, pp. 64-69) and an indigenous sand-tempered ware, called Wythe (pp. 69-73). Associated with these wares were a few sherds of the Grayson and Radford Series, and a soapstone-tempered ware called the Smyth Series (pp. 67-69) that originated south of the survey area, probably in North Carolina (Figure 26) and shows the movement of a people into the area or the effects of diffusion. The seriation, temporally controlled by strata cuts, trade goods, Southern Cult objects, carbon-14 dates, and the appearance of corn (Figure 27, Table A) showed the Wythe Series to be the initial pottery of the area, to be replaced through a period of about 500 years by the limestone-tempered Radford Series. Along the Powell and Clinch Rivers, where these rivers exit from the angle of southwest Virginia made by Ten-

nessee and Kentucky, another set of two pottery series were predominant. These were the New River Series (Evans, 1955, pp. 56-60) and the Lee Series (pp. 58-61) with the high proportions of pottery types having stamped exteriors and very distinctive rims, called informally "Pseudo-Iroquoian" by many South-easternists. The Lee Series is undoubtedly the most northern extension of a southern ceramic influence, and the New River Series entered the area along rivers flowing through Tennessee (Figure 16). Dating here is tentative but belongs to an early Mississippian period. Another area extended from the New River southwest along the West Virginia-Kentucky state lines to the Lower Clinch and Powell Rivers Ceramic Area. Here the predominant wares are of the Radford and New River Series, with the latter entering the area via New River on the north and along the headwaters of the Tennessee River from the southwest (Figure 19). This area is probably of an early Mississippian date also.

The pottery study failed to produce clear-cut evidence of an Early and Middle Woodland occupation and undoubtedly is the result of the incompleteness of the survey. On the other hand the collected projectile points or those seen in private collections indicated that the region was occupied continuously from Paleo-Indian times to the Historic Period (Table B). The plethora of individual types leads one to believe that southwest Virginia had received cultural influences from all parts of the compass. Among these may be mentioned Lamoka from the northwest and north, Lowe Flared Base from the midwest, Savannah River from the south, and Clarks-ville Small Triangular from the east. In addition to those already described in the literature there was a type, Patrick Indented Base (p. 90; Plate 16e-g) that had not been accounted for previously and may be considered a local development, pending further investigation.

By way of complementing the study of projectile points, stone flakes found on archeological sites were related to the geological distribution of stone types

(pp. 106-112) within the survey area. Most aboriginal use was made of chert and quartz, and this in turn was related to the geographical area where they are naturally available. The same is true of the varieties of more infrequent use: quartzite, rhyolite, and ferruginous sandstone. Preferences, however, did occur in the manufacture of certain projectile points, and where the natural distribution of quartz and chert are adjacent to one another there is evidence of a transition from the predominant use of quartz to chert.

Food quest and community organization varied through time. Archaic Period sites are small, yield small amounts of accumulated refuse, and apparently were located in ecological niches where particular forest foods were available. Late Woodland sites consisted of large villages, some surrounded by stockades, and village refuse was profuse. Southwest Virginia, during this period, may be said to have had its own "population explosion." The faunal remains showed that a wide variety of mammals were hunted, with deer the most frequently represented animal. The rivers provided, besides fish, large quantities of snail and mussel. There is evidence from the distribution of sites without ceramics, but with well-known and late projectile-point types that an annual cycle in the food quest was carried out.

From this brief review it is apparent that southwest Virginia received an unusually large number of cultural influences from many directions and was truly a cultural crossroads, but it was also a center of development with its own innovations. If we are to understand more completely the cultural developments in this important area of eastern North America more scientific archeological work must be proposed and executed! Some mounds are still intact but threatened by pothunters; many of the large villages have already been lost to the bulldozer and indiscriminate digging; and most if not all, of the caves have been plundered. It is obvious that here the forces of destruction are many magnitudes greater than those for conservation.

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# Appendix

TABLES 1–4

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia

Pottery Series and Types	Fd-1		Fd-2		Gs-1		Gs-5		Gs-6A			
									Surface		0-6 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	84	77.0	—	—	—	—	—	—	—	—
Plain . . . . .	1	1.6	10	9.2	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	3	2.8	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	13	20.5	4	3.6	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	14	22.1	101	92.6	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	1	1.6	5	4.6	—	—	—	—	—	—	1	0.5
Plain . . . . .	2	3.2	3	2.8	—	—	—	—	—	—	—	—
Cordmarked . . . . .	3	4.8	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	6	9.5	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	12	18.1	8	7.4	—	—	—	—	—	—	1	0.5
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	14	16.3	5	12.0	5	9.7	5	2.5
Cordmarked . . . . .	—	—	—	—	4	4.5	1	2.5	—	—	—	—
Plain . . . . .	—	—	—	—	5	5.9	4	10.2	—	—	1	0.5
Fabric Impressed . . . . .	—	—	—	—	1	1.9	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	2	5.1	—	—	1	0.5
SUBTOTAL . . . . .	—	—	—	—	24	29.8	12	29.8	5	9.7	7	3.5
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	23	36.5	—	—	39	46.0	11	27.1	32	61.4	113	64.5
Cordmarked . . . . .	—	—	—	—	4	4.5	7	18.0	—	—	3	1.7
Plain . . . . .	11	17.5	—	—	7	8.2	8	20.0	—	—	7	4.0
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	3	4.8	—	—	—	—	1	2.5	—	—	4	2.3
SUBTOTAL . . . . .	37	58.8	—	—	50	58.7	27	70.2	32	61.4	127	72.5
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	1	1.2	—	—	—	—	1	0.5
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	1	0.5
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	1	1.2	—	—	—	—	2	1.0
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	7	8.1	—	—	8	15.5	9	5.1
Cordmarked . . . . .	—	—	—	—	—	—	—	—	1	1.9	1	0.5
Plain . . . . .	—	—	—	—	2	2.1	—	—	3	5.8	7	4.0
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	2	3.8	21	11.9
SUBTOTAL . . . . .	—	—	—	—	9	10.2	—	—	14	27.0	38	21.5
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	1	1.2	—	—	1	1.9	2	1.0
GRAND TOTAL . . . . .	63	100.0	109	100.0	85	100.0	39	100.0	52	100.0	177	100.0



TABLE 1.—*Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued*

Pottery Series and Types	Gs-6A-Cont.		Gs-6B		Gs-6C		Gs-8		Gy-1		Gy-3	
	6-12 inches											
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed	-	-	-	-	-	-	-	-	17	14.4	-	-
Plain	-	-	-	-	-	-	-	-	10	8.5	-	-
Cordmarked	-	-	-	-	-	-	-	-	1	0.9	-	-
Corncob Impressed	-	-	-	-	-	-	-	-	-	-	-	-
Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	-	-	3	2.5	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	31	26.3	-	-
GRAYSON SERIES												
Net and Knot Roughened	-	-	-	-	-	-	-	-	56	47.2	2	-
Plain	-	-	-	-	-	-	-	-	26	22.0	3	-
Cordmarked	-	-	-	-	-	-	-	-	1	0.9	-	-
Scraped	-	-	-	-	-	-	-	-	1	0.9	-	-
Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	-	-	1	0.9	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	85	71.9	5	-
LEE SERIES												
Linear Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Plain	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed	2	3.7	-	-	-	-	13	20.0	-	-	-	-
Cordmarked	1	1.8	-	-	-	-	4	6.0	-	-	-	-
Plain	-	-	-	-	-	-	5	7.5	-	-	-	-
Fabric Impressed	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	1	1.5	-	-	-	-
SUBTOTAL	3	5.5	-	-	-	-	23	35.0	-	-	-	-
RADFORD SERIES												
Knot Roughened and Net Impressed	39	71.1	64	67.0	35	70.0	30	46.0	-	-	-	-
Cordmarked	1	1.8	1	1.5	-	-	3	4.5	-	-	-	-
Plain	-	-	7	7.5	2	4.0	7	11.5	-	-	-	-
Simple Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Scraped	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	1	1.8	5	5.5	2	4.0	2	3.0	1	0.9	-	-
SUBTOTAL	41	74.7	77	81.5	39	78.0	42	65.0	1	.09	-	-
SMYTH SERIES												
Net and Knot Roughened	-	-	-	-	-	-	-	-	-	-	-	-
Plain	-	-	-	-	-	-	-	-	1	0.9	-	-
Scraped	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	1	0.9	-	-
WYTHE SERIES												
Net and Knot Roughened	2	3.5	11	11.4	3	6.0	-	-	-	-	-	-
Cordmarked	-	-	-	-	-	-	-	-	-	-	-	-
Plain	1	1.8	3	2.8	4	8.0	-	-	-	-	-	-
Scraped	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed	1	1.8	-	-	-	-	-	-	-	-	-	-
Check Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	6	10.9	3	2.8	4	8.0	-	-	-	-	-	-
SUBTOTAL	10	18.0	17	17.0	11	22.0	-	-	-	-	-	-
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked	-	-	-	-	-	-	-	-	-	-	-	-
Plain	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES	1	1.8	1	1.5	-	-	-	-	-	-	-	-
GRAND TOTAL	55	100.0	95	100.0	50	100.0	65	100.0	118	100.0	5	-

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Gy-4		Gy-6		Gy-8		Gy-9		Gy-10, Square A			
									0-3 inches		3-9 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	4	40.0	17	28.8	1	8.3	2	6.5	2	7.4	8	11.4
Plain . . . . .	—	—	7	11.8	—	—	3	9.7	1	3.7	2	2.8
Cordmarked . . . . .	2	20.0	4	6.8	1	8.3	2	6.5	2	7.4	3	4.2
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.4
SUBTOTAL . . . . .	6	60.0	28	47.4	2	16.6	7	22.7	5	18.5	14	19.8
GRAYSON SERIES												
Net and Knot Roughened . . . . .	1	10.0	16	27.2	2	16.7	5	16.1	10	37.0	20	28.2
Plain . . . . .	2	20.0	7	11.8	3	25.2	12	39.0	4	14.8	20	28.2
Cordmarked . . . . .	—	—	2	3.4	1	8.3	6	19.0	6	22.3	3	4.2
Scraped . . . . .	—	—	2	3.4	—	—	1	3.2	1	3.7	1	1.4
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.4
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	3	4.2
Unclassified . . . . .	1	10.0	—	—	—	—	—	—	1	3.7	7	9.8
SUBTOTAL . . . . .	4	40.0	27	45.8	6	50.2	24	77.3	22	81.5	55	77.4
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	1	8.3	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	1	8.3	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	2	16.6	—	—	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	1	1.7	1	8.3	—	—	—	—	—	—
Plain . . . . .	—	—	3	5.1	1	8.3	—	—	—	—	2	2.8
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	4	6.8	2	16.6	—	—	—	—	2	2.8
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	10	100.0	59	100.0	12	100.0	31	100.0	27	100.0	71	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Gy-10, Square A—Cont.				Gy-10, Square B						Gy-10, Square C	
	9-15 inches		15-21 inches		Layer A		Layer B		Layer C		0-3 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	4	22.4	—	—	1	—	18	9.5	3	2.9	1	—
Plain . . . . .	—	—	—	—	—	—	2	1.1	2	1.9	—	—
Cordmarked . . . . .	—	—	—	—	—	—	10	5.3	1	1.0	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	5	2.6	—	—	—	—
SUBTOTAL . . . . .	4	22.4	—	—	1	—	35	18.5	6	5.8	1	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	10	55.5	2	15.4	2	—	51	27.0	14	13.8	2	—
Plain . . . . .	1	5.5	4	30.7	3	—	52	27.5	26	25.4	1	—
Cordmarked . . . . .	2	11.1	1	7.7	—	—	16	8.5	11	10.8	—	—
Scraped . . . . .	—	—	—	—	1	—	11	5.8	1	1.0	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	7	3.7	18	17.7	—	—
Fabric Impressed . . . . .	—	—	5	38.5	—	—	3	1.6	4	3.9	—	—
Unclassified . . . . .	1	5.5	1	7.7	1	—	11	5.8	9	8.8	—	—
SUBTOTAL . . . . .	14	77.6	13	100.0	7	—	151	79.9	83	81.4	3	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	2	1.1	1	1.0	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	2	1.1	1	1.0	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	1	0.5	12	11.8	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	18	100.0	13	100.0	8	—	189	100.0	102	100.0	4	—

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Gy-10, Square C—Continued										Gy-10, Square D	
	3-9 inches		9-15 inches		15-21 inches		21-27 inches		27-33 inches		0-6 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	8	9.2	20	13.3	2	2.9	1	1.4	1	—	—	—
Plain . . . . .	4	4.6	4	2.7	1	1.5	1	1.4	1	—	—	—
Cordmarked . . . . .	3	3.5	8	5.3	2	2.9	4	5.6	1	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	2	2.3	2	1.3	2	2.9	—	—	—	—	—	—
SUBTOTAL . . . . .	17	19.6	34	22.6	7	10.2	6	8.4	3	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	30	34.4	44	30.0	24	34.9	16	22.5	1	—	1	—
Plain . . . . .	19	21.8	31	20.7	10	14.5	20	28.0	—	—	—	—
Cordmarked . . . . .	8	9.2	19	12.7	13	18.8	9	12.7	—	—	—	—
Scraped . . . . .	6	6.8	6	4.0	3	4.3	4	5.6	—	—	1	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	4	4.6	6	4.0	9	13.0	13	18.3	—	—	1	—
Unclassified . . . . .	—	—	9	6.0	3	4.3	—	—	—	—	—	—
SUBTOTAL . . . . .	68	76.8	115	77.4	62	79.8	62	87.1	1	—	3	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	1	1.2	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	1	1.2	1	0.7	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	2	2.4	1	0.7	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER												
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	3	4.2	—	—	—	—
GRAND TOTAL . . . . .	87	100.0	150	100.0	69	100.0	71	99.7	4	—	3	—

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Gy-10, Square D—Continued										Gy-12	
	6-12 inches		12-18 inches		18-24 inches		24-27 inches		Burial			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed	5	26.4	1	8.3	—	—	—	—	2	16.8	—	—
Plain	1	5.3	—	—	—	—	—	—	—	—	2	—
Cordmarked	1	5.3	1	8.3	—	—	—	—	—	—	1	—
Corncob Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	7	37.0	2	16.6	—	—	—	—	1	8.3	—	—
GRAYSON SERIES									3	25.1	3	—
Net and Knot Roughened	5	26.0	1	8.3	8	61.5	1	—	6	50.0	—	—
Plain	3	15.8	6	50.0	—	—	—	—	1	8.3	—	—
Cordmarked	—	—	—	—	—	—	—	—	1	8.3	—	—
Scraped	1	5.3	1	8.3	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped	1	5.3	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	1	5.3	2	16.8	2	15.4	—	—	1	8.3	—	—
Unclassified	—	—	—	—	1	7.7	—	—	—	—	—	—
SUBTOTAL	11	47.7	10	83.4	11	84.6	2	—	9	74.9	—	—
LEE SERIES												
Linear Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened	—	—	—	—	—	—	—	—	—	—	—	—
Plain	1	5.3	—	—	—	—	—	—	—	—	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	1	5.3	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER	—	—	—	—	2	15.4	—	—	—	—	—	—
UNCLASSIFIED SERIES												
GRAND TOTAL	19	100.0	12	100.0	13	100.0	2	—	12	100.0	3	—

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Gy-14		Gy-15		Gy-17		He-1		He-2		He-3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	1	—	4	13.8	5	41.7	170	78.6	157	77.4	120	54.3
Plain . . . . .	—	—	4	13.8	1	8.3	33	15.3	35	17.2	63	28.5
Cordmarked . . . . .	—	—	4	13.8	1	8.3	9	4.3	5	2.4	13	5.9
Corn cob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	4	1.8
Unclassified . . . . .	2	—	3	10.1	—	—	4	1.8	4	2.0	1	0.5
SUBTOTAL . . . . .	3	—	15	51.5	7	58.3	216	100.0	201	99.0	201	91.0
GRAYSON SERIES												
Net and Knot Roughened . . . . .	3	—	11	38.0	2	16.8	—	—	—	—	—	—
Plain . . . . .	1	—	1	3.5	1	8.3	—	—	1	0.5	9	4.1
Cordmarked . . . . .	—	—	1	3.5	1	8.3	—	—	—	—	3	1.3
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	4	1.8
Unclassified . . . . .	—	—	1	3.5	—	—	—	—	—	—	3	1.3
SUBTOTAL . . . . .	4	—	14	48.5	4	33.4	—	—	1	0.5	19	8.5
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	1	0.5
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	1	0.5	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	1	0.5	—	1	0.5
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	1	8.3	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	1	8.3	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED AND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	7	—	29	100.0	12	100.0	216	100.0	203	100.0	221	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	He-4		Le-1		Le-14		Le-17, Cut A					
							Surface		0-6 inches		6-12 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	56	52.9	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	37	34.8	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	4	3.8	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	1	0.9	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	8	7.6	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	106	100.0	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	-	-	-	-	60	43.0	70	35.6	22	36.0	38	45.0
Checked Stamped . . . . .	-	-	-	-	3	2.0	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	6	4.0	2	1.0	-	-	-	-
Plain . . . . .	-	-	-	-	25	18.0	11	5.6	6	9.5	7	8.5
Unclassified . . . . .	-	-	-	-	7	5.0	10	5.1	2	3.5	1	1.5
SUBTOTAL . . . . .	-	-	-	-	101	72.0	93	47.3	30	49.0	46	55.0
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	3	10.0	7	5.0	35	18.0	9	15.0	9	10.7
Cordmarked . . . . .	-	-	21	70.0	13	9.2	7	3.5	3	5.0	8	9.5
Plain . . . . .	-	-	6	20.0	7	5.0	34	17.5	9	15.0	13	15.3
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	2	1.5	26	13.2	8	12.5	8	9.5
SUBTOTAL . . . . .	-	-	30	100.0	29	20.7	102	52.2	29	47.5	38	45.0
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	-	-	1	0.8	-	-	2	3.5	-	-
Cordmarked . . . . .	-	-	-	-	1	0.8	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	5	3.6	1	0.5	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	3	2.0	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	10	7.2	1	0.5	2	3.5	-	-
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	106	100.0	30	100.0	140	99.9	196	100.0	61	100.0	84	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Le-17, Cut A—Cont.		Le-17, Cut B									
	12-18 inches		0-6 inches		6-12 inches		12-18 inches		18-24 inches		24-30 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	12	66.5	1	-	1	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	2	11.0	1	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	1	-	-	-
SUBTOTAL . . . . .	14	77.5	2	-	1	-	-	-	1	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	2	11.0	3	-	1	-	-	-	-	-	-	-
Cordmarked . . . . .	1	5.5	3	-	6	-	-	-	-	-	-	-
Plain . . . . .	1	5.5	3	-	4	-	-	-	4	-	2	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	2	-	1	-	-	-	-	-
SUBTOTAL . . . . .	4	22.0	9	-	13	-	1	-	4	-	2	-
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Check Stamped . . . . .	-	-	-	-	-	-	1	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	1	-	-	-	-	-
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL . . . . .	18	99.5	11	-	14	-	2	-	5	-	2	-



TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	My-1		My-2		My-3		My-4A		My-4B		My-5	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corn cob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	1	0.7	—	—	10	6.7	2	7.6	—	—
Plain . . . . .	—	—	—	—	—	—	2	1.1	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	15	10.0	2	7.6	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped Simple . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	1	0.7	—	—	1	0.6	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	28	18.4	4	15.2	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	3	2.0	9	3.5	4	2.7	1	3.8	6	6.1
Cordmarked . . . . .	—	—	—	—	2	0.8	3	2.0	—	—	2	2.0
Plain . . . . .	—	—	2	1.3	7	2.6	3	2.0	1	3.8	5	5.1
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	5	3.3	18	6.9	10	6.7	2	7.6	13	13.2
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	39	27.2	83	31.5	41	28.0	7	27.4	29	29.8
Cordmarked . . . . .	—	—	12	8.8	5	1.9	20	13.5	3	11.5	5	5.1
Plain . . . . .	—	—	48	33.2	25	9.4	19	12.7	4	15.5	15	15.3
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	1	0.7	1	0.4	—	—	—	—	—	—
Unclassified . . . . .	—	—	3	2.1	—	—	—	—	—	—	2	2.0
SUBTOTAL . . . . .	—	—	103	72.0	114	43.2	80	54.2	14	54.4	51	52.2
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	1	0.4	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	1	0.4	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	6	4.1	71	27.4	11	7.4	3	11.4	15	15.4
Cordmarked . . . . .	—	—	7	4.8	5	1.9	6	3.6	2	7.6	5	5.0
Plain . . . . .	—	—	9	6.2	40	15.5	5	3.4	1	3.8	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	3	2.0	8	3.0	5	3.4	—	—	9	9.2
Check Stamped . . . . .	—	—	—	—	1	0.4	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	2	0.8	—	—	—	—	1	1.0
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.0
Unclassified . . . . .	1	—	9	6.2	1	0.4	1	0.6	—	—	3	3.0
SUBTOTAL . . . . .	1	—	34	23.3	128	48.4	28	18.7	6	22.8	34	34.6
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	1	0.7	—	—	3	2.0	—	—	—	—
GRAND TOTAL . . . . .	1	—	144	100.0	261	99.9	149	100.0	26	100.0	98	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	My-6		My-7		My-8		My-9		My-11			
									0-6 inches		6-12 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>DAN RIVER SERIES</b>												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
<b>GRAYSON SERIES</b>												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	2	2.8	-	-	1	0.2
Plain . . . . .	-	-	-	-	1	0.6	-	-	2	0.2	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	1	0.6	2	2.8	2	0.2	1	0.2
<b>LEE SERIES</b>												
Linear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
<b>NEW RIVER SERIES</b>												
Knot Roughened and Net Impressed . . . . .	3	6.1	1	0.7	6	3.6	2	2.8	13	1.3	1	0.2
Cordmarked . . . . .	-	-	-	-	-	-	-	-	1	0.1	1	0.2
Plain . . . . .	1	2.0	-	-	2	1.2	-	-	2	0.2	1	0.2
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	1	0.2
SUBTOTAL . . . . .	4	8.1	1	0.7	8	4.8	2	2.8	16	1.6	4	0.8
<b>RADFORD SERIES</b>												
Knot Roughened and Net Impressed . . . . .	3	6.1	78	53.7	136	81.2	36	50.0	681	65.0	288	65.7
Cordmarked . . . . .	2	4.0	14	9.7	8	4.8	5	7.0	43	4.0	25	5.7
Plain . . . . .	7	14.3	44	30.4	10	6.2	12	16.5	127	12.5	55	12.2
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	1	0.1	1	0.2
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	2	4.1	1	0.7	2	1.2	-	-	32	3.0	12	2.7
SUBTOTAL . . . . .	14	28.5	137	94.5	156	93.4	53	73.5	884	84.5	381	86.5
<b>SMYTH SERIES</b>												
Net and Knot Roughened . . . . .	-	-	-	-	1	0.6	-	-	-	-	-	-
Plain . . . . .	2	2.0	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	2	2.0	-	-	1	0.6	-	-	-	-	-	-
<b>WYTHE SERIES</b>												
Net and Knot Roughened . . . . .	10	21.1	1	0.7	-	-	4	5.6	83	8.3	32	7.4
Cordmarked . . . . .	1	2.0	2	1.3	-	-	-	-	2	0.2	1	0.2
Plain . . . . .	9	19.0	2	1.4	-	-	5	6.9	43	4.3	18	4.1
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	1	0.2
Fabric Impressed . . . . .	3	6.1	-	-	-	-	-	-	6	0.6	1	0.2
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	5	11.0	2	1.4	-	-	2	2.8	3	0.3	2	0.4
SUBTOTAL . . . . .	28	59.2	7	4.8	-	-	11	15.3	137	13.7	55	12.5
<b>UNCLASSIFIED SAND TEMPERED SERIES</b>												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
<b>UNCLASSIFIED MICA TEMPER</b>												
UNCLASSIFIED SERIES . . . . .	1	2.0	-	-	1	0.6	4	5.6	-	-	-	-
GRAND TOTAL . . . . .	49	99.8	145	100.0	167	100.0	72	100.0	1,039	100.0	441	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	My-11—Continued										My-15	
	12-18 inches		18-24 inches		24-30 inches		30-36 inches		36-46 inches			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	21	13.5	2	1.7	-	-	1	2.4	-	-	-	-
Plain . . . . .	4	2.5	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	1	0.6	2	1.8	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	1	0.6	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	27	17.2	4	3.5	-	-	1	2.4	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	9	5.7	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	2	1.3	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	11	7.0	-	-	-	-	-	-	-	-	-	-
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	83	53.0	85	74.9	41	70.7	12	28.5	9	41.0	14	46.7
Cordmarked . . . . .	6	3.8	8	7.0	2	3.5	3	7.2	2	9.0	-	-
Plain . . . . .	14	8.7	9	7.8	3	5.1	3	7.2	2	9.0	5	16.7
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	5	4.2	-	-	1	2.4	-	-	6	20.0
SUBTOTAL . . . . .	103	65.5	107	93.9	46	79.3	19	45.3	13	59.0	25	83.4
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	15	9.6	-	-	7	11.9	11	26.1	4	18.5	3	10.0
Cordmarked . . . . .	1	0.6	-	-	-	-	1	2.4	1	4.5	-	-
Plain . . . . .	-	-	2	1.7	2	3.5	5	11.9	2	9.0	1	3.3
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	1	1.8	-	-	1	4.5	-	-
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	1	0.9	2	3.5	5	11.9	1	4.5	1	3.3
SUBTOTAL . . . . .	16	10.2	3	2.6	12	20.7	22	52.3	9	41.0	5	16.6
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	157	99.9	114	100.0	58	100.0	42	100.0	22	100.0	30	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	My-17		My-18		Pk-1		Pk-2		Pk-3		Pk-4	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>DAN RIVER SERIES</b>												
Net Impressed . . . . .	—	—	—	—	11	55.0	161	82.7	174	61.5	8	66.7
Plain . . . . .	—	—	—	—	3	15.0	28	14.3	24	8.4	4	33.3
Cordmarked . . . . .	—	—	—	—	2	10.0	2	1.0	37	13.1	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	1	0.5	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	1	5.0	1	0.5	19	6.7	—	—
SUBTOTAL . . . . .	—	—	—	—	17	85.0	193	99.0	254	89.7	12	100.0
<b>GRAYSON SERIES</b>												
Net and Knot Roughened . . . . .	—	—	1	5.0	—	—	1	0.5	7	2.5	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	5	1.8	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	1	0.4	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	1	5.0	2	10.0	—	—	9	3.4	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	1	0.4	—	—
SUBTOTAL . . . . .	—	—	2	10.0	2	10.0	1	0.5	23	8.5	—	—
<b>LEE SERIES</b>												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
<b>NEW RIVER SERIES</b>												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	—	—	4	1.4	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	1	0.4	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	1	0.5	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	1	0.5	5	1.8	—	—
<b>RADFORD SERIES</b>												
Knot Roughened and Net Impressed . . . . .	—	—	9	45.0	1	5.0	—	—	—	—	—	—
Cordmarked . . . . .	—	—	1	5.0	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	2	10.0	—	—	—	—	—	—	—	—
Unclassified . . . . .	2	—	6	30.0	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	2	—	18	90.0	1	5.0	—	—	—	—	—	—
<b>SMYTH SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
<b>WYTHE SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	2	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	1	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	4	—	—	—	—	—	—	—	—	—	—	—
<b>UNCLASSIFIED SAND TEMPERED SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
<b>UNCLASSIFIED MICA TEMPER</b>	—	—	—	—	—	—	—	—	—	—	—	—
<b>UNCLASSIFIED SERIES</b>												
GRAND TOTAL . . . . .	6	—	20	100.0	20	100.0	195	100.0	282	100.0	12	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pk-6		Pk-7		Pk-8		Pk-9		Pk-10		Pk-14	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	8	35.0	—	—	35	40.6	97	69.5	108	81.7	32	72.6
Plain . . . . .	7	30.4	—	—	8	9.2	30	21.4	20	15.1	6	13.7
Cordmarked . . . . .	1	4.3	—	—	9	10.4	4	2.8	2	1.6	1	2.3
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	1	0.8	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	3	13.0	—	—	5	5.8	5	3.5	1	0.8	—	—
SUBTOTAL . . . . .	19	82.7	—	—	57	66.0	136	97.2	132	100.0	39	88.6
GRAYSON SERIES												
Net and Knot Roughened . . . . .	1	4.3	4	—	—	—	—	—	—	—	5	11.4
Plain . . . . .	2	8.7	1	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	3	—	—	—	1	0.7	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	4.3	3	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	4	17.3	11	—	—	—	2	1.4	—	—	5	11.4
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	13	15.4	1	0.7	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	9	10.4	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	4	4.7	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	26	30.5	1	0.7	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	—	—	1	0.7	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	3	3.5	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	3	3.5	1	0.7	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	23	100.0	11	—	86	100.0	140	100.0	132	100.0	44	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pk-15		Pk-17		Pk-18		Pk-19		Pk-20		Pk-21	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	120	58.3	32	46.3	1	—	49	52.5	51	50.6
Plain . . . . .	—	—	60	28.9	21	30.5	1	—	22	23.4	37	35.5
Cordmarked . . . . .	—	—	3	1.5	9	13.2	2	—	4	4.2	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	16	7.8	2	2.9	—	—	7	7.4	3	3.0
SUBTOTAL . . . . .	—	—	199	96.5	64	92.9	4	—	82	87.5	91	89.1
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	2	2.9	2	—	1	1.0	5	4.9
Plain . . . . .	—	—	1	0.5	1	1.4	—	—	1	1.0	—	—
Cordmarked . . . . .	—	—	—	—	—	—	1	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	3	1.5	1	1.4	2	—	—	—	4	4.0
Unclassified . . . . .	1	—	—	—	1	1.4	—	—	1	1.0	—	—
SUBTOTAL . . . . .	1	—	4	2.0	5	7.1	5	—	3	3.0	9	8.9
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	1	0.5	—	—	—	—	5	5.3	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.0
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	1	0.5	—	—	—	—	5	5.3	1	1.0
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	1	0.5	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	1	0.5	—	—	—	—	3	3.2	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	1	1.0	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	2	1.0	—	—	—	—	4	4.2	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	1	—	206	100.0	69	100.0	9	—	94	100.0	101	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pk-22		Pk-24		Pu-2		Pu-3					
							Surface		0-6 inches		6-12 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	3	—	1	—	—	—	—	—	—	—	—	—
Plain . . . . .	3	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	1	—	1	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	8	—	2	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	1	0.4
Plain . . . . .	—	—	—	—	1	0.5	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	1	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	1	—	1	0.5	—	—	—	—	1	0.4
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	7	3.5	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	1	0.5	—	—	—	—	2	0.6
Plain . . . . .	—	—	—	—	3	1.5	1	1.2	5	1.2	5	1.6
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	1	0.2	1	0.4
SUBTOTAL . . . . .	—	—	—	—	11	5.5	1	1.2	6	1.4	8	2.8
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	91	45.5	62	76.7	356	83.9	224	86.0
Cordmarked . . . . .	—	—	—	—	13	6.5	4	4.9	7	1.6	9	3.5
Plain . . . . .	—	—	1	—	18	9.0	8	10.0	31	7.3	15	5.7
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	2	0.4	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	2	0.4	—	—
Unclassified . . . . .	—	—	—	—	5	2.5	3	3.6	11	2.6	—	—
SUBTOTAL . . . . .	—	—	1	—	127	63.5	77	95.2	409	96.2	248	95.2
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	25	12.5	1	1.2	2	0.4	—	—
Cordmarked . . . . .	—	—	—	—	13	6.5	1	1.2	2	0.4	1	0.4
Plain . . . . .	—	—	—	—	15	7.5	1	1.2	5	1.2	2	0.6
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	3	1.5	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	1	0.5	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	1	0.5	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	2	0.4	2	0.6
SUBTOTAL . . . . .	—	—	—	—	58	29.0	3	3.6	11	2.4	5	1.6
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	1	0.5	—	—	—	—	—	—
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	8	—	4	—	198	99.0	81	100.0	426	100.0	262	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pu-3—Continued						Pu-8A		Pu-8B		Pu-9	
	12-18 inches		18-24 inches		24-30 inches						Surface	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	1	0.7	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	1	0.5	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	1	0.7	—	—	—	—	1	0.5	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	2	1.5	—	—	—	—	4	2.1	21	29.5	—	—
Cordmarked . . . . .	1	0.7	1	1.8	—	—	—	—	8	11.0	—	—
Plain . . . . .	—	—	—	—	—	—	3	1.5	8	11.0	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	3	2.2	1	1.8	—	—	7	3.6	37	51.5	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	102	77.5	45	79.0	41	82.0	92	48.1	1	1.4	—	—
Cordmarked . . . . .	3	2.3	6	10.3	—	—	54	28.4	—	—	1	2.7
Plain . . . . .	17	12.8	1	1.8	3	6.0	16	8.4	4	5.6	1	2.7
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	4	3.0	2	3.6	4	8.0	3	1.5	—	—	—	—
SUBTOTAL . . . . .	126	95.6	54	94.6	48	96.0	165	86.4	5	7.0	2	3.4
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	8	4.3	22	30.5	26	71.1
Cordmarked . . . . .	—	—	—	—	—	—	4	2.1	—	—	2	5.4
Plain . . . . .	—	—	1	1.8	1	2.0	4	2.1	6	8.3	6	16.5
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	1	1.8	—	—	—	—	2	2.7	1	2.7
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	2	1.5	—	—	1	2.0	2	1.0	—	—	—	—
SUBTOTAL . . . . .	2	1.5	2	3.6	2	4.0	18	9.5	30	41.5	35	95.7
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	132	100.0	57	100.0	50	100.0	191	100.0	72	100.0	37	99.1



TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pu-9—Continued											
	0-6 inches		6-12 inches		12-18 inches		18-24 inches		24-30 inches		30-36 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	5	2.9	1	1.2	—	—	—	—	—	—
Cordmarked . . . . .	—	—	1	0.6	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	4	2.3	2	2.4	7	9.5	2	3.0	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	1	0.6	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	11	6.4	3	3.6	7	9.5	2	3.0	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	3	3.7	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	3	3.7	—	—	—	—	3	4.0	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	3	3.7	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	9	11.1	—	—	—	—	3	4.0	—	—	—	—
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	56	70.2	139	81.0	70	83.3	55	74.4	59	90.0	3	—
Cordmarked . . . . .	3	3.7	3	1.7	—	—	—	—	—	—	—	—
Plain . . . . .	11	13.8	14	8.0	10	11.9	5	6.8	5	7.0	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	3	1.7	1	1.2	1	1.3	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	1.2	2	1.2	—	—	3	4.0	—	—	—	—
SUBTOTAL . . . . .	71	88.9	161	93.6	81	96.4	64	86.5	64	97.0	3	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES	80	100.0	172	100.0	84	100.0	74	100.0	66	100.0	3	—
GRAND TOTAL . . . . .	80	100.0	172	100.0	84	100.0	74	100.0	66	100.0	3	—

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Pu-10		Ru-1		Ru-2							
					Surface		0-6 inches		6-12 inches		12-18 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	16	13.3	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	6	5.0	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	17	14.0	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	39	32.3	—	—	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	31	38.6	41	34.3	28	37.7	88	55.7	134	60.8	166	52.2
Cordmarked . . . . .	20	25.0	10	8.4	6	8.3	4	2.5	5	2.3	5	1.6
Plain . . . . .	9	11.2	25	20.8	37	50.0	57	36.2	70	31.4	113	35.4
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	3	0.9
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	3	0.9
Fabric Impressed . . . . .	—	—	2	1.7	1	1.3	1	0.5	1	0.5	1	0.3
Unclassified . . . . .	3	3.7	1	0.8	2	2.7	6	3.8	11	5.0	28	8.7
SUBTOTAL . . . . .	63	78.5	79	66.0	74	100.0	156	98.7	221	100.0	319	100.0
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened . . . . .	7	8.9	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	7	8.9	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	2	2.5	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	1.2	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	17	21.5	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	2	1.7	—	—	2	1.3	—	—	—	—
GRAND TOTAL . . . . .	80	100.0	120	100.0	74	100.0	158	100.0	221	100.0	319	100.0

TABLE 1.—*Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued*

Pottery Series and Types	Ru-2—Cont.		Ru-3A		Ru-3B		Ru-4		Ru-7		Ru-9	
	18-24 inches											
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	35	12.5	31	18.7	1	10.0	48	58.0	16	12.5
Cordmarked . . . . .	-	-	13	4.6	16	9.7	-	-	7	8.5	1	0.8
Plain . . . . .	-	-	16	5.7	17	10.4	-	-	12	14.3	76	59.3
Fabric Impressed . . . . .	-	-	-	-	1	0.6	-	-	-	-	-	-
Unclassified . . . . .	-	-	4	1.4	4	2.4	1	10.0	2	2.4	1	0.8
SUBTOTAL . . . . .	-	-	68	24.2	69	41.8	2	20.0	69	83.2	94	73.4
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	21	48.7	121	43.0	52	31.4	4	40.0	4	4.8	3	2.3
Cordmarked . . . . .	8	18.6	39	13.8	12	7.3	-	-	2	2.4	-	-
Plain . . . . .	12	28.0	45	16.0	24	14.7	-	-	5	6.0	5	4.0
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	1	0.4	3	1.8	-	-	-	-	1	0.8
Unclassified . . . . .	2	4.7	5	1.8	3	1.8	2	20.0	2	2.4	3	2.3
SUBTOTAL . . . . .	43	100.0	211	75.0	94	57.0	6	60.0	13	15.6	12	9.4
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	-	-	1	0.4	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	12	9.4
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	1	0.6	-	-	-	-	1	0.8
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	1	0.4	-	-	1	10.0	-	-	8	6.3
SUBTOTAL . . . . .	-	-	2	0.8	1	0.6	1	10.0	-	-	21	16.4
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	1	0.6	1	10.0	1	1.2	1	0.8
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	43	100.0	281	100.0	165	100.0	10	100.0	83	100.0	128	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Ru-11		Ru-13		Sc-1		Sc-3		Sc-4		Sc-7	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>DAN RIVER SERIES</b>												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
<b>GRAYSON SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	1	0.8	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	1	0.8	—	—
<b>LEE SERIES</b>												
Linear Stamped . . . . .	—	—	—	—	1	0.5	—	—	—	—	1	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	7	5.8	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	1	0.5	—	—	7	5.8	1	—
<b>NEW RIVER SERIES</b>												
Knot Roughened and Net Impressed . . . . .	35	22.6	17	15.1	85	46.5	—	—	—	—	—	—
Cordmarked . . . . .	14	9.0	2	1.8	31	16.9	—	—	—	—	—	—
Plain . . . . .	75	48.8	3	2.6	50	27.3	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	0.6	2	1.8	8	4.4	—	—	—	—	—	—
SUBTOTAL . . . . .	125	81.0	24	21.3	174	95.1	—	—	—	—	—	—
<b>RADFORD SERIES</b>												
Knot Roughened and Net Impressed . . . . .	6	3.8	57	50.4	—	—	2	10.0	12	10.0	2	—
Cordmarked . . . . .	5	3.2	4	3.5	—	—	—	—	1	0.8	1	—
Plain . . . . .	10	6.3	16	14.2	—	—	—	—	—	—	2	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	1	0.6	—	—	—	—	—	—	7	5.8	—	—
Unclassified . . . . .	1	0.6	4	3.5	—	—	—	—	5	4.1	1	—
SUBTOTAL . . . . .	23	14.5	81	71.6	—	—	2	10.0	25	20.7	6	—
<b>SMYTH SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
<b>WYTHE SERIES</b>												
Net and Knot Roughened . . . . .	1	0.6	7	6.2	2	1.1	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	2	1.2	1	0.9	6	3.3	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	4	2.7	—	—	—	—	1	5.0	—	—	—	—
SUBTOTAL . . . . .	7	4.5	8	7.1	8	4.4	1	5.0	—	—	—	—
<b>UNCLASSIFIED SAND TEMPERED SERIES</b>												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	1	5.0	5	4.1	—	—
Cordmarked . . . . .	—	—	—	—	—	—	13	65.0	12	10.0	1	—
Plain . . . . .	—	—	—	—	—	—	2	10.0	16	13.4	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	1	5.0	51	42.7	1	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	3	2.5	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	17	85.0	87	72.7	2	—
<b>UNCLASSIFIED MICA TEMPER</b>												
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	155	100.0	113	100.0	183	100.0	20	100.0	120	100.0	9	—

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Sc-9		Sm-4						Sm-5			
			Surface		0-6 inches		6-12 inches		Surface		0-6 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	1	0.4	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	1	0.4	-	-	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	11	30.5	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	1	2.8	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	4	11.1	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	16	44.4	-	-	-	-	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	1	2.7	21	7.2	19	7.0	18	8.0	9	5.5	8	6.2
Cordmarked . . . . .	2	5.6	-	-	-	-	-	-	1	0.6	1	0.8
Plain . . . . .	-	-	8	2.6	6	2.2	5	2.2	2	1.2	2	1.6
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	2	5.6	-	-	-	-	2	0.9	-	-	-	-
SUBTOTAL . . . . .	5	13.9	29	9.8	25	9.2	25	11.1	12	7.3	11	8.6
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	5	13.9	140	46.4	140	51.5	112	50.0	25	15.0	31	24.4
Cordmarked . . . . .	1	2.7	-	-	1	0.4	1	0.4	-	-	-	-
Plain . . . . .	3	8.4	69	24.4	43	15.9	27	12.2	10	6.0	8	6.2
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	1	0.6	-	-
Fabric Impressed . . . . .	-	-	-	-	1	0.4	-	-	1	0.6	-	-
Unclassified . . . . .	4	11.1	4	1.4	7	2.6	8	3.6	-	-	-	-
SUBTOTAL . . . . .	13	36.1	213	72.2	192	70.8	148	66.2	37	22.2	39	30.6
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	2	0.7	-	-	4	1.8	31	18.7	6	4.8
Plain . . . . .	-	-	-	-	-	-	-	-	7	4.2	4	3.0
Scraped . . . . .	-	-	-	-	-	-	-	-	5	3.0	1	0.8
Unclassified . . . . .	-	-	-	-	-	-	-	-	1	0.6	-	-
SUBTOTAL . . . . .	-	-	2	0.7	-	-	4	1.8	44	26.5	11	8.6
WYTHE SERIES												
Net and Knot Roughened . . . . .	-	-	37	12.6	36	13.3	35	15.6	57	34.3	45	35.4
Cordmarked . . . . .	-	-	1	0.3	1	0.4	1	0.4	-	-	1	0.8
Plain . . . . .	-	-	10	3.4	7	2.6	4	1.8	15	9.1	11	8.6
Scraped . . . . .	-	-	-	-	-	-	-	-	1	0.4	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	2	0.7	9	3.3	5	2.2	-	-	9	7.1
SUBTOTAL . . . . .	-	-	50	17.0	53	19.6	46	20.4	72	43.4	66	51.9
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	2	5.6	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	2	5.6	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER												
Unclassified . . . . .	-	-	1	0.3	-	-	1	0.4	1	0.6	-	-
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	36	100.0	295	100.0	271	100.0	224	99.9	166	100.0	127	99.7

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southeastern Virginia												
Pottery Series and Types	Sm-5—Cont.		Sm-7	Sm-8	Sm-9A	Sm-9B	Sm-10A					
	6–12 inches											
	No.	%	No.	%	No.	%	No.	%	No.	%		
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	2	1.0	—	—	
Plain . . . . .	1	0.8	—	—	—	—	—	—	—	—	—	
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	
SUBTOTAL . . . . .	1	0.8	—	—	—	—	—	2	1.0	—	—	
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	10	7.9	13	3.0	—	—	5	2.9	—	—	—	
Cordmarked . . . . .	1	0.8	—	—	—	—	—	—	—	—	—	
Plain . . . . .	4	3.1	2	0.5	—	—	—	—	—	—	—	
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	
SUBTOTAL . . . . .	15	11.8	15	3.5	—	—	5	2.9	—	—	—	
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	8	6.2	254	58.7	77	67.2	3	—	9	5.3	145	70.2
Cordmarked . . . . .	1	0.8	2	0.5	—	—	—	—	1	0.6	5	2.3
Plain . . . . .	1	0.8	107	24.8	28	24.1	1	—	2	1.1	45	21.7
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	2	0.5	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	0.8	3	0.7	—	—	1	—	—	—	2	1.0
SUBTOTAL . . . . .	11	8.6	368	85.2	105	91.3	5	—	12	7.0	197	95.2
SMYTH SERIES												
Net and Knot Roughened . . . . .	34	26.8	2	0.5	—	—	—	—	9	5.2	—	—
Plain . . . . .	10	7.8	—	—	—	—	—	—	1	0.6	1	0.5
Scraped . . . . .	—	—	—	—	—	—	—	—	1	0.6	—	—
Unclassified . . . . .	1	0.8	—	—	—	—	—	—	1	0.6	—	—
SUBTOTAL . . . . .	45	35.4	2	0.5	—	—	—	—	12	7.0	1	0.5
WYTHE SERIES												
Net and Knot Roughened . . . . .	38	30.0	31	7.0	5	4.3	—	—	121	70.5	3	1.3
Cordmarked . . . . .	1	0.8	2	0.5	—	—	—	—	1	0.6	—	—
Plain . . . . .	13	10.2	12	2.8	4	3.5	—	—	16	9.1	1	0.5
Scraped . . . . .	1	0.8	2	0.5	—	—	—	—	1	0.6	1	0.5
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	1	0.9	—	—	—	—	—	—
SUBTOTAL . . . . .	53	41.8	47	10.8	10	8.7	—	—	139	80.8	5	2.3
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	2	1.6	—	—	—	—	2	—	4	2.3	2	1.0
GRAND TOTAL . . . . .	127	100.0	432	100.0	115	100.0	7	—	172	100.0	207	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Sm-10B								Sm-11B		Sm-16	
	Surface		0-6 inches		6-12 inches		12-18 inches					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	1	0.6	1	0.3	1	0.3	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	1	0.6	1	0.3	1	0.3	-	-	-	-	-	-
LEE SERIES												
Linear Stamped . . . . .	-	-	-	-	1	0.3	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	1	0.3	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	3	1.8
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	1	0.6
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	1	0.6
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	5	3.0
SUBTOTAL	-	-	-	-	-	-	-	-	-	-	5	3.0
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	102	59.7	268	73.5	212	71.0	45	69.2	5	-	63	38.6
Cordmarked . . . . .	4	2.3	2	0.6	4	1.3	1	1.5	-	-	15	9.3
Plain . . . . .	39	22.9	66	18.0	55	18.4	11	17.0	2	-	63	38.6
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	1	0.3	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	2	1.1	12	3.1	16	5.3	6	9.3	1	-	4	2.5
SUBTOTAL	148	86.6	349	95.5	287	96.0	63	97.0	8	-	145	89.0
SMYTH SERIES												
Net and Knot Roughened . . . . .	8	4.7	1	0.3	2	0.7	-	-	-	-	-	-
Plain . . . . .	9	5.3	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	2	1.1	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	19	11.1	1	0.3	2	0.7	-	-	-	-	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	2	1.1	5	1.4	1	0.3	1	1.5	-	-	6	3.7
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	1	0.6	5	1.4	4	1.3	1	1.5	-	-	6	3.7
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	1	0.6
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	4	1.1	3	1.0	-	-	-	-	-	-
SUBTOTAL	3	1.7	14	3.9	8	2.6	2	3.0	-	-	13	8.0
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	171	100.0	365	100.0	299	99.9	65	100.0	8	-	163	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Sm-17		Sm-19		Sm-22		Sm-25		Sm-26			
									Surface		0-6 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	1	0.7	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	1	0.7	—	—	—	—	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	—	—	—	—	9	3.1	6	1.9	9	1.9	4	4.2
Cordmarked . . . . .	—	—	—	—	2	0.7	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	2	0.7	5	1.5	6	1.3	1	1.0
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	1	0.4	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	14	4.9	11	3.4	15	3.2	5	5.2
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	2	—	110	76.3	84	29.5	186	60.5	259	54.5	49	52.6
Cordmarked . . . . .	1	—	5	3.5	24	8.5	42	13.5	15	3.2	3	3.1
Plain . . . . .	6	—	22	16.0	61	21.3	58	18.0	68	14.3	17	17.5
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	2	0.4	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	1	0.3	4	0.9	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	1	0.3	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	1	0.2	—	—
Unclassified . . . . .	3	—	2	1.4	4	1.7	7	2.2	12	2.5	1	1.0
SUBTOTAL . . . . .	12	—	139	97.2	173	61.0	295	94.8	361	76.0	70	74.2
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	1	0.4	1	0.3	4	0.9	1	1.0
Plain . . . . .	—	—	—	—	—	—	—	—	6	1.2	1	1.0
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	1	0.4	1	0.3	10	2.1	2	2.0
WYTHE SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	80	28.0	2	0.6	77	16.0	10	10.3
Cordmarked . . . . .	—	—	—	—	1	0.4	—	—	—	—	—	—
Plain . . . . .	—	—	3	2.1	13	4.6	2	0.6	6	1.2	2	2.0
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	2	0.7	1	0.3	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	5	5.2
SUBTOTAL . . . . .	—	—	3	2.1	96	33.7	5	1.5	83	17.2	17	17.5
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	7	1.5	1	1.0
GRAND TOTAL . . . . .	12	—	143	100.0	284	100.0	312	100.0	476	100.0	95	99.9



TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Sm-26—Cont.		Sm-31		Sm-32		St-1		St-3		Tz-1	
	6-8 inches										0-6 inches	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed	—	—	—	—	—	—	44	36.0	5	20.8	—	—
Plain	—	—	—	—	—	—	29	25.3	1	4.2	—	—
Cordmarked	—	—	—	—	—	—	4	3.3	1	4.2	—	—
Corncob Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	8	6.8	—	—	—	—
GRAYSON SERIES							85	71.4	7	29.2	—	—
Net and Knot Roughened	—	—	—	—	—	—	10	8.5	7	29.2	—	—
Plain	—	—	—	—	—	—	13	11.1	1	4.2	—	—
Cordmarked	—	—	—	—	—	—	—	—	2	8.3	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	10	8.5	3	12.5	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	4	16.6	—	—
LEE SERIES							33	28.1	17	70.8	—	—
Linear Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed	—	—	—	—	1	0.6	—	—	—	—	1	1.4
Cordmarked	—	—	1	0.6	—	—	—	—	—	—	—	—
Plain	—	—	2	1.1	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	1	1.4
SUBTOTAL	—	—	3	1.7	1	0.6	—	—	—	—	2	2.8
RADFORD SERIES												
Knot Roughened and Net Impressed	14	50.0	109	60.8	102	59.7	—	—	—	—	33	46.5
Cordmarked	1	3.5	18	10.0	10	5.9	—	—	—	—	3	4.2
Plain	3	10.5	33	18.0	36	21.0	—	—	—	—	26	36.7
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped	—	—	1	0.6	—	—	—	—	—	—	—	—
Curvilinear Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	1	0.6	—	—	—	—	—	—	—	—
Unclassified	—	—	11	6.0	13	7.6	—	—	—	—	3	4.2
SUBTOTAL	18	64.0	173	96.0	161	94.2	—	—	—	—	65	91.6
SMYTH SERIES												
Net and Knot Roughened	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES												
Net and Knot Roughened	6	21.6	1	0.6	4	2.3	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	2	7.2	1	0.6	—	—	—	—	—	—	3	4.2
Scraped	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Check Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	2	7.2	2	1.1	5	2.9	—	—	—	—	1	1.4
SUBTOTAL	10	36.0	4	2.3	9	5.2	—	—	—	—	4	5.6
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked	—	—	—	—	—	—	—	—	—	—	—	—
Plain	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES												
GRAND TOTAL	28	100.0	180	100.0	171	100.0	118	99.5	24	100.0	71	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Tz-1—Cont.		Tz-2		Tz-7		Tz-8		Wg-1		Wg-2	
	6-12 inches											
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Corncob Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
GRAYSON SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	1	0.2	1	2.8
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	1	0.4	1	2.8
LEE SERIES												
Linear Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Checked Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	-	-	12	3.3	38	31.8	-	-	249	37.0	-	-
Cordmarked . . . . .	-	-	1	0.3	5	4.2	-	-	9	1.3	-	-
Plain . . . . .	-	-	4	1.1	7	6.0	-	-	21	3.0	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	1	0.3	5	4.2	-	-	5	0.7	-	-
SUBTOTAL . . . . .	-	-	18	5.0	55	46.2	-	-	284	42.0	-	-
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	28	38.8	268	73.3	44	37.6	11	68.5	292	43.6	-	-
Cordmarked . . . . .	7	9.7	29	7.9	5	4.2	4	25.0	15	2.2	28	78.0
Plain . . . . .	31	43.0	39	10.4	8	6.8	1	6.5	41	6.1	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Curvilinear Stamped . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Unclassified . . . . .	4	5.7	12	3.4	4	3.4	-	-	3	0.5	5	3.6
SUBTOTAL . . . . .	70	97.2	348	95.0	61	52.0	16	100.0	355	53.2	33	91.6
SMYTH SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	2	0.4	-	-
WYTHE SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	1	0.9	-	-	20	3.0	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Scraped . . . . .	-	-	-	-	-	-	-	-	1	0.2	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	1	0.2	1	2.8
Check Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Simple Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Straight Stamped . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	2	2.8	-	-	1	0.9	-	-	1	0.2	1	2.8
SUBTOTAL . . . . .	2	2.8	-	-	2	1.8	-	-	25	4.0	2	5.6
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Cordmarked . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Plain . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Fabric Impressed . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
Unclassified . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED MICA TEMPER . . . . .	-	-	-	-	-	-	-	-	-	-	-	-
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	72	100.0	366	100.0	118	100.0	16	100.0	668	100.0	36	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Wg-4		Wg-7		Wg-10		Wg-11		Wg-12		Wg-13	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES												
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Corn cob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.0
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.0
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
LEE SERIES												
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES												
Knot Roughened and Net Impressed . . . . .	9	7.9	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	1	0.9	—	—	3	1.1	—	—	—	—	—	—
Plain . . . . .	2	1.7	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	12	10.5	—	—	11	4.1	—	—	—	—	—	—
RADFORD SERIES												
Knot Roughened and Net Impressed . . . . .	10	60.7	92	53.7	57	21.6	188	38.6	88	56.3	56	54.4
Cordmarked . . . . .	3	7.6	6	3.5	103	37.0	97	20.1	16	10.1	10	9.7
Plain . . . . .	16	14.0	34	20.0	80	29.5	137	28.1	41	26.0	23	22.4
Simple Stamped . . . . .	—	—	—	—	8	3.0	14	2.9	4	2.5	3	2.9
Straight Stamped . . . . .	—	—	—	—	—	—	2	0.4	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	2	1.3	—	—
Unclassified . . . . .	5	4.3	7	4.1	5	1.8	12	2.5	3	1.9	2	1.9
SUBTOTAL . . . . .	94	81.6	139	81.3	253	92.9	450	92.6	154	98.1	94	91.3
SMYTH SERIES												
Net and Knot Roughened . . . . .	—	—	3	1.7	—	—	4	0.8	1	0.6	—	—
Plain . . . . .	1	0.9	9	5.3	—	—	2	0.4	—	—	3	2.9
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	1	0.6	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	1	0.9	13	7.6	—	—	6	1.2	1	0.6	3	2.9
WYTHE SERIES												
Net and Knot Roughened . . . . .	5	4.4	8	4.7	1	0.4	7	1.5	2	1.3	—	—
Cordmarked . . . . .	—	—	—	—	1	0.5	1	0.2	—	—	—	—
Plain . . . . .	1	0.9	6	3.5	4	2.2	19	3.9	—	—	2	1.9
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	1	0.6	—	—	3	0.6	—	—	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	2	1.7	4	2.3	—	—	—	—	—	—	2	1.9
SUBTOTAL . . . . .	8	7.0	19	11.1	6	3.0	30	6.2	2	1.3	4	3.8
UNCLASSIFIED SAND TEMPERED SERIES												
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—	1	1.0
UNCLASSIFIED SERIES												
GRAND TOTAL . . . . .	115	100.0	171	100.0	270	100.0	486	100.0	157	100.0	103	100.0

TABLE 1.—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Wg-15		Wg-16		Ws-1		Wy-1		Wy-2	
	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES										
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES										
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
LEE SERIES										
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES										
Knot Roughened and Net Impressed . . . . .	—	—	4	0.8	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	1	0.2	1	0.2	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	1	0.2	5	1.0	—	—	—	—	—	—
RADFORD SERIES										
Knot Roughened and Net Impressed . . . . .	232	52.4	315	64.0	24	34.0	2	0.8	—	—
Cordmarked . . . . .	25	28.5	55	11.0	28	39.2	—	—	—	—
Plain . . . . .	56	12.7	75	15.0	16	22.6	4	1.6	9	—
Simple Stamped . . . . .	11	2.5	12	2.5	1	1.4	1	0.4	—	—
Straight Stamped . . . . .	1	0.2	1	0.2	—	—	—	—	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	1	0.2	—	—	—	—	—	—	—	—
Unclassified . . . . .	9	2.3	12	2.5	1	1.4	—	—	—	—
SUBTOTAL . . . . .	435	98.8	470	95.2	70	98.6	7	2.8	9	—
SMYTH SERIES										
Net and Knot Roughened . . . . .	—	—	3	0.6	—	—	—	—	—	—
Plain . . . . .	2	0.4	6	1.2	—	—	—	—	—	—
Scraped . . . . .	—	—	1	0.2	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	2	0.4	10	2.0	—	—	—	—	—	—
WYTHE SERIES										
Net and Knot Roughened . . . . .	2	0.4	4	0.8	—	—	195	79.3	—	—
Cordmarked . . . . .	—	—	—	—	—	—	2	0.8	—	—
Plain . . . . .	1	0.2	5	1.0	—	—	33	13.4	—	—
Scraped . . . . .	—	—	—	—	—	—	2	0.8	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	6	2.5	—	—
Check Stamped . . . . .	—	—	—	—	—	—	1	0.4	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	1	1.4	—	—	—	—
SUBTOTAL . . . . .	3	0.6	9	1.8	1	1.4	239	97.2	—	—
UNCLASSIFIED SAND, TEMPERED SERIES										
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED SERIES . . . . .	—	—	—	—	—	—	—	—	—	—
GRAND TOTAL . . . . .	441	100.0	494	100.0	71	100.0	246	100.0	9	—

TABLE 1:—Frequency of pottery series and types from surface collections and stratigraphic excavations at sites in southwest Virginia—Continued

Pottery Series and Types	Wy-3		Wy-4		Wy-5		Wy-7		Wy-8	
	No.	%	No.	%	No.	%	No.	%	No.	%
DAN RIVER SERIES										
Net Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Corncob Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
GRAYSON SERIES										
Net and Knot Roughened . . . . .	—	—	2	3.1	—	—	2	4.1	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	1	1.5	—	—	2	4.1	—	—
Scraped . . . . .	—	—	2	3.1	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	3	2.0	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	5	7.7	3	2.0	4	8.2	—	—
LEE SERIES										
Linear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Checked Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
NEW RIVER SERIES										
Knot Roughened and Net Impressed . . . . .	2	0.9	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	1	1.5	—	—	—	—	—	—
SUBTOTAL . . . . .	2	0.9	1	1.5	—	—	—	—	—	—
RADFORD SERIES										
Knot Roughened and Net Impressed . . . . .	67	31.0	24	37.0	68	46.5	3	6.2	151	71.0
Cordmarked . . . . .	2	0.9	—	—	3	2.0	—	—	1	0.4
Plain . . . . .	18	8.2	13	20.0	22	15.0	13	26.5	34	16.0
Simple Stamped . . . . .	2	0.9	1	1.5	2	1.3	—	—	1	0.4
Straight Stamped . . . . .	—	—	—	—	—	—	1	2.0	—	—
Curvilinear Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	1	0.5	4	6.2	4	2.7	—	—	4	2.0
SUBTOTAL . . . . .	90	41.5	42	64.7	99	67.5	17	34.7	191	89.8
SMYTH SERIES										
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Scraped . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
WYTHE SERIES										
Net and Knot Roughened . . . . .	98	45.5	3	4.6	23	15.7	13	26.6	18	8.5
Cordmarked . . . . .	1	0.5	2	3.1	—	—	1	2.0	1	0.4
Plain . . . . .	21	9.7	9	13.9	—	—	8	16.5	2	0.9
Scraped . . . . .	1	0.5	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	3	1.4	2	3.1	2	1.3	6	12.0	—	—
Check Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Simple Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Straight Stamped . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	1	1.5	17	11.6	—	—	—	—
SUBTOTAL . . . . .	124	57.6	17	26.1	43	29.2	28	57.1	21	9.8
UNCLASSIFIED SAND TEMPERED SERIES										
Net and Knot Roughened . . . . .	—	—	—	—	—	—	—	—	—	—
Cordmarked . . . . .	—	—	—	—	—	—	—	—	—	—
Plain . . . . .	—	—	—	—	—	—	—	—	—	—
Fabric Impressed . . . . .	—	—	—	—	—	—	—	—	—	—
Unclassified . . . . .	—	—	—	—	—	—	—	—	—	—
SUBTOTAL . . . . .	—	—	—	—	—	—	—	—	—	—
UNCLASSIFIED MICA TEMPER . . . . .	—	—	—	—	2	1.3	—	—	1	0.4
UNCLASSIFIED SERIES										
GRAND TOTAL . . . . .	216	100.0	65	100.0	147	100.0	49	100.0	213	100.0

Site and Cut	Chert		Quartz		Quartzite		Ferruginous Sandstone		Rhyolite		Other		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALLEGHANY Co., N.C.														
All-1	28	32.5	58	67.5	-	-	-	-	-	-	-	-	86	100.0
All-2	3	27.0	8	63.0	-	-	-	-	-	-	-	-	11	100.0
CARROLL Co.														
Ca-1	6	4.0	109	96.0	-	-	-	-	-	-	-	-	115	100.0
Ca-3	3	4.0	70	93.3	2	2.7	-	-	-	-	-	-	75	100.0
Ca-4	-	-	34	100.0	-	-	-	-	-	-	-	-	34	100.0
Ca-5	2	10.5	19	89.5	-	-	-	-	-	-	-	-	21	100.0
Ca-6	61	55.5	42	38.2	2	1.8	1	0.9	4	3.6	-	-	110	100.0
Ca-7	21	29.5	43	60.5	3	4.3	-	-	4	5.7	-	-	71	100.0
DICKENSON Co.														
Dk-1	26	100.0	-	-	-	-	-	-	-	-	-	-	26	100.0
Dk-2	119	100.0	-	-	-	-	-	-	-	-	-	-	119	100.0
FLOYD Co.														
Fd-1	28	28.0	62	62.0	8	8.0	-	-	2	2.0	-	-	100	100.0
Fd-2	7	50.0	4	28.5	2	14.2	-	-	1	7.3	-	-	14	100.0
Fd-3	29	29.5	69	69.5	-	-	-	-	1	1.0	-	-	99	100.0
Fd-4	5	20.8	19	79.2	-	-	-	-	-	-	-	-	24	100.0
Fd-5	6	6.8	85	89.0	4	4.2	-	-	-	-	-	-	95	100.0
Fd-6	-	-	40	100.0	-	-	-	-	-	-	-	-	40	100.0
Fd-7	37	43.5	48	56.5	-	-	-	-	-	-	-	-	85	100.0
GILES Co.														
Gs-1	4	-	-	-	-	-	-	-	-	-	-	-	4	-
Gs-4	178	97.5	-	-	-	-	3	2.0	1	0.5	-	-	182	100.0
Gs-5	85	98.0	2	2.0	-	-	-	-	-	-	-	-	87	100.0
Gs-6A, Surface	11	92.0	-	-	1	8.0	-	-	-	-	-	-	12	100.0
0-6 in	30	94.0	2	6.0	-	-	-	-	-	-	-	-	32	100.0
6-12 in	12	92.0	1	8.0	-	-	-	-	-	-	-	-	13	100.0
Gs-6B	5	-	-	-	-	-	-	-	-	-	-	-	5	-
Gs-6C	6	-	1	-	-	-	-	-	-	-	-	-	7	-
Gs-7	104	92.0	8	7.0	2	1.0	-	-	-	-	-	-	114	100.0
Gs-8	26	100.0	-	-	-	-	-	-	-	-	-	-	26	100.0
GRAYSON Co.														
Gy-1	15	37.5	20	50.0	-	-	-	-	5	12.5	-	-	40	100.0
Gy-2A	7	5.7	110	89.4	-	-	-	-	6	4.9	-	-	123	100.0
Gy-2B	1	1.2	83	97.5	-	-	-	-	1	1.3	-	-	85	100.0
Gy-2C	2	2.5	66	97.5	-	-	-	-	-	-	-	-	68	100.0
Gy-2D	1	2.0	49	94.0	1	2.0	-	-	1	2.0	-	-	52	100.0
Gy-4	14	77.5	4	22.5	-	-	-	-	-	-	-	-	18	100.0
Gy-5	1	-	4	-	-	-	-	-	-	-	-	-	5	-
Gy-6	75	76.0	12	12.0	-	-	-	-	12	12.0	-	-	99	100.0
Gy-7	8	22.0	26	72.5	-	-	-	-	2	5.5	-	-	36	100.0
Gy-8	7	63.5	1	9.1	-	-	-	-	3	27.4	-	-	11	100.0

TABLE 2.—Frequency of stone flakes by materials from sites in southwest Virginia—Continued

[illegible]





TABLE 2.—Frequency of stone flakes by materials from sites in southwest Virginia—Continued

Site and Cut	Chert		Quartz		Quartzite		Ferruginous Sandstone		Rhyolite		Other		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PULASKI CO.														
Pu-1	25	19.0	8	5.7	2	1.3	104	74.0	-	-	-	-	139	100.0
Pu-2	111	87.0	14	11.0	2	1.2	1	0.8	-	-	-	-	128	100.0
Pu-3, Surface	2	-	-	-	-	-	-	-	-	-	-	-	2	-
0-6 in	27	84.5	4	12.5	1	3.0	-	-	-	-	-	-	32	100.0
6-12 in	18	100.0	-	-	-	-	-	-	-	-	-	-	18	100.0
12-18 in	17	90.0	-	-	2	10.0	-	-	-	-	-	-	19	100.0
18-24 in	11	92.0	1	8.0	-	-	-	-	-	-	-	-	12	100.0
24-30 in	5	-	-	-	-	-	-	-	-	-	-	-	5	-
Pu-4	6	-	-	-	-	-	-	-	-	-	-	-	6	-
Pu-5	51	89.5	4	7.0	-	-	2	3.5	-	-	-	-	57	100.0
Pu-6	19	90.5	2	9.5	-	-	-	-	-	-	-	-	21	100.0
Pu-7	107	57.5	17	9.1	14	7.5	48	25.9	-	-	-	-	186	100.0
Pu-8A	6	-	2	-	-	-	-	-	-	-	-	-	8	-
Pu-8B	4	-	2	-	1	-	-	-	-	-	-	-	7	-
Pu-9, Surface	3	-	2	-	-	-	-	-	-	-	-	-	5	-
0-6 in	20	61.0	10	30.0	3	9.0	-	-	-	-	-	-	33	100.0
6-12 in	17	74.0	6	26.0	-	-	-	-	-	-	-	-	23	100.0
12-18 in	13	76.0	3	18.0	1	6.0	-	-	-	-	-	-	17	100.0
18-24 in	10	62.5	6	37.5	-	-	-	-	-	-	-	-	16	100.0
24-30 in	9	69.0	2	15.5	2	15.5	-	-	-	-	-	-	13	100.0
30-36 in	3	-	4	-	-	-	-	-	-	-	-	-	7	-
Pu-11	25	15.6	-	-	-	-	141	84.4	-	-	-	-	166	100.0
Pu-12	16	23.2	23	33.3	30	43.5	-	-	-	-	-	-	69	100.0
ROANOKE CO.														
Rn-1	11	55.0	2	10.0	7	35.0	-	-	-	-	-	-	20	100.0
RUSSELL CO.														
Ru-1	133	99.0	2	1.0	-	-	-	-	-	-	-	-	135	100.0
Ru-2, Surface	64	100.0	-	-	-	-	-	-	-	-	-	-	64	100.0
0-6 in	52	100.0	-	-	-	-	-	-	-	-	-	-	52	100.0
6-12 in	51	98.0	-	-	-	-	-	-	1	2.0	-	-	52	100.0
12-18 in	22	95.0	-	-	-	-	-	-	-	-	1	5.0	23	100.0
18-24 in	5	-	-	-	-	-	-	-	-	-	-	-	5	-
Ru-3A	88	100.0	-	-	-	-	-	-	-	-	-	-	88	100.0
Ru-3B	40	97.5	-	-	-	-	1	2.5	-	-	-	-	41	100.0
Ru-5	231	99.6	-	-	-	-	1	0.4	-	-	-	-	232	100.0
Ru-7	65	100.0	-	-	-	-	-	-	-	-	-	-	65	100.0
Ru-8	286	99.7	1	0.3	-	-	-	-	-	-	-	-	287	100.0
Ru-9	13	100.0	-	-	-	-	-	-	-	-	-	-	13	100.0
Ru-11	9	-	-	-	-	-	-	-	-	-	-	-	9	-
Ru-13	90	100.0	-	-	-	-	-	-	-	-	-	-	90	100.0
SCOTT CO.														
Sc-1	81	100.0	-	-	-	-	-	-	-	-	-	-	81	100.0
Sc-2	146	100.0	-	-	-	-	-	-	-	-	-	-	146	100.0
Sc-3	254	100.0	-	-	-	-	-	-	-	-	-	-	254	100.0
Sc-4	199	100.0	-	-	-	-	-	-	-	-	-	-	199	100.0
Sc-7	299	100.0	-	-	-	-	-	-	-	-	-	-	299	100.0
Sc-9	189	100.0	-	-	-	-	-	-	-	-	-	-	189	100.0



TABLE 2.—Frequency of stone flakes by materials from sites in southwest Virginia—Continued

Site and Cut	Chert		Quartz		Quartzite		Ferruginous Sandstone		Rhyolite		Other		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WASHINGTON Co.														
Wg-1	47	97.5	—	—	—	—	—	—	1	2.5	—	—	48	100.0
Wg-2	200	95.0	1	0.5	—	—	—	—	8	4.0	—	—	210	100.0
Wg-4	305	97.0	5	1.6	—	—	—	—	3	1.0	1	0.4	314	100.0
Wg-5A	161	99.0	2	1.0	—	—	—	—	—	—	—	—	163	100.0
Wg-5B	58	100.0	—	—	—	—	—	—	—	—	—	—	58	100.0
Wg-6	144	98.6	—	—	1	0.7	—	—	1	0.7	—	—	146	100.0
Wg-7	85	98.5	—	—	—	—	—	—	—	—	2	1.5	87	100.0
Wg-8	180	96.0	6	3.0	—	—	—	—	—	—	2	1.0	188	100.0
Wg-9	94	97.0	3	3.0	—	—	—	—	—	—	—	—	97	100.0
Wg-10	98	99.0	—	—	—	—	—	—	—	—	1	1.0	99	100.0
Wg-11	51	98.0	—	—	—	—	—	—	—	—	1	2.0	52	100.0
Wg-12	71	100.0	—	—	—	—	—	—	—	—	—	—	71	100.0
Wg-13	54	96.5	—	—	—	—	—	—	2	3.5	—	—	56	100.0
Wg-15	317	100.0	—	—	—	—	—	—	—	—	—	—	317	100.0
Wg-16	55	98.5	1	1.5	—	—	—	—	—	—	—	—	56	100.0
WYTHE Co.														
Wy-1	13	62.0	8	18.0	—	—	—	—	—	—	—	—	21	100.0
Wy-2	7	—	1	—	—	—	—	—	—	—	—	—	8	—
Wy-3	79	97.5	2	2.5	—	—	—	—	—	—	—	—	81	100.0
Wy-4	112	97.5	3	2.5	—	—	—	—	—	—	—	—	115	100.0
Wy-5	60	81.0	14	19.0	—	—	—	—	—	—	—	—	74	100.0
Wy-6	109	70.0	21	13.5	—	—	—	—	25	16.5	—	—	155	100.0
Wy-7	64	96.0	3	4.0	—	—	—	—	—	—	—	—	67	100.0
Wy-8	85	99.0	—	—	—	—	—	—	1	1.0	—	—	86	100.0
Wy-9	127	86.5	4	2.8	1	0.7	—	—	15	10.0	—	—	147	100.0
Wy-10A	159	79.5	4	2.0	—	—	—	—	37	18.5	—	—	200	100.0
Wy-10B	161	87.0	—	—	3	1.7	20	10.8	—	—	1	0.5	185	100.0
Wy-11	49	93.0	4	7.0	—	—	—	—	—	—	—	—	53	100.0
Wy-12	3	2.5	31	25.8	—	—	—	—	—	—	86	71.7	120	100.0

TABLE 3.—*Occurrence of bones from sites in southwest Virginia*

Site and Cut	Deer	Squirrel	Fox	Rabbit	Cougar	Bear	Beaver	Raccoon	Elk	Human	Horse	Pig	Cow	Fish	Terrapine	Turkey	Snake	Unidentified Large Mammal	Unidentified Bird	Unidentified Animal Fauna
GILES Co.																				
Gs-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	-	
Gs-3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	1	
Gs-6A, 0-6 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
6-12 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
Gs-6B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	
Gs-6C	2	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	
Gs-9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
GRAYSON Co.																				
Gy-10, Square A																				
0-3 in	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	
3-9 in	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	
9-15 in	3	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	13	-	25
15-21 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4	41
Gy-10, Square B																				
Layer B	6	-	-	-	-	-	-	-	-	-	-	-	-	9	7	-	-	67	6	
Layer C	54	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	125	23	28
Gy-10, Square C																				
0-3 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
3-9 in	2	-	-	-	-	-	-	-	-	-	-	-	-	2	3	1	1	25	-	20
9-15 in	12	-	-	-	-	-	-	-	-	-	-	-	-	1	7	-	1	68	16	24
15-21 in	9	-	-	-	-	-	-	-	-	-	-	-	-	8	17	-	-	65	25	38
21-27 in	28	-	-	1	-	-	-	-	-	-	-	-	-	3	23	-	-	134	19	72
27-33 in	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	13	1	1
Gy-10, Square D																				
6-12 in	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	6	1	
12-18 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7
18-24 in	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	15	3	3
HENRY Co.																				
He-1	14	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	10	
He-2	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	1	
He-3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LEE Co.																				
Lc-9	1	-	-	-	-	-	-	-	-	93	-	-	-	-	1	3	-	8	-	16
Lc-11	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-	
Lc-14	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	13	1	
Lc-15	-	-	-	-	-	-	-	-	-	-	1	-	18	-	-	4	-	-	-	

TABLE 3.—Occurrence of bones from sites in southwest Virginia—Continued

Site and Cut	Deer	Squirrel	Fox	Rabbit	Cougar	Bear	Beaver	Raccoon	Elk	Human	Horse	Pig	Cow	Fish	Terrapine	Turkey	Snake	Unidentified Large Mammal	Unidentified Bird	Unidentified Animal Fragments
<b>MONTGOMERY Co.</b>																				
My-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	10	-	-
My-7	9	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-
My-8	26	-	-	-	-	-	-	-	-	1	-	-	-	-	2	3	-	18	-	3
My-11, 0-6 in	25	-	-	-	-	-	-	-	-	-	-	-	-	1	12	-	-	168	4	10
6-12 in	56	-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
12-24 in	153	1	4	-	-	-	1	-	-	-	-	-	-	2	20	21	-	212	-	56
24-30 in	11	-	-	-	-	-	-	-	-	-	-	-	-	4	1	-	-	6	7	-
30-36 in	8	-	-	-	-	-	-	-	3	-	-	-	-	2	-	-	-	13	-	-
36-46 in	11	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	30	-	4
<b>PATRICK Co.</b>																				
Pk-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-
<b>PULASKI Co.</b>																				
Pu-3, Surface	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	1
0-6 in	6	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	51	-	3
6-12 in	16	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	39	1	-
12-18 in	15	-	-	-	-	-	-	-	-	-	-	-	-	2	5	-	-	22	6	6
24-30 in	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-
30-36 in	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	1	-
Pu-8A	35	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4	-	16	-	-
Pu-8B	7	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	10	1	3
Pu-9, 6-12 in	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	177	-	-
12-18 in	91	-	-	-	-	-	1	-	-	-	-	-	-	-	7	-	-	194	4	44
<b>RUSSELL Co.</b>																				
Ru-1	16	-	-	-	-	1	-	-	-	3	-	-	-	-	1	-	-	46	1	-
Ru-2, Surface	9	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	37	2	10
0-6 in	7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	12	-	-
6-12 in	5	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	26	1	-
12-18 in	31	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	52	4	27
18-24 in	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-
Ru-3A	38	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	71	8	2
Ru-3B	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8	1	1
Ru-7	2	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	7
Ru-9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Ru-11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-
Ru-13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
<b>SCOTT Co.</b>																				
Sc-1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	-	-
Sc-3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	24	2	4
Sc-4	5	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-
Sc-6	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-
Sc-7	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
Sc-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-



TABLE 4.—Occurrence of shells from sites in southwest Virginia

Site and cut	<i>Cyclonaias tuberculata</i>	<i>Leptoxis subglobosa</i>	<i>Oxytrema simplex</i> and <i>O. autocarinata</i>	<i>Mudalia carinata</i>	<i>Oxytrema catenaria</i> <i>dislocata</i>	<i>Ambloxis crassulum</i>	<i>I<sub>o</sub></i>	Unidentified gastropods	Unidentified pelecypods	Total gastropods	Total pelecypods
GILES CO.											
Gs-1	2	-	-	-	-	-	-	16	-	16	2
Gs-6A, Surface	1	4	-	-	-	-	-	32	-	36	1
0-6 in	12	-	-	-	-	-	-	81	2	81	14
6-12 in	6	-	-	-	-	-	-	15	-	15	6
Gs-6B	-	55	45	-	-	-	-	-	-	100	-
Gs-6C	4	-	-	-	-	-	-	62	-	62	4
Gs-8	-	17	-	-	-	-	-	2	-	19	-
Gs-9	3	-	-	-	-	-	-	196	-	196	3
GRAYSON CO.											
Gy-10, Square A											
0-3 in	-	1	-	-	-	-	-	4	-	5	-
3-9 in	1	8	-	-	-	-	-	198	4	206	5
9-15 in	-	-	-	-	-	-	-	152	6	152	6
Gy-10, Square B											
Layer B	2	6	-	-	-	-	-	251	21	257	23
Layer C	5	44	-	-	-	-	-	106	33	150	38
Gy-10, Square C											
3-9 in	2	-	-	-	-	-	-	126	5	126	7
9-15 in	-	-	-	-	-	-	-	165	26	165	26
15-21 in	3	-	-	-	-	-	-	127	21	127	24
21-27 in	1	33	-	-	-	-	-	87	32	120	33
Gy-10, Square D											
6-12 in	1	-	-	-	-	-	-	1	-	1	1
12-18 in	-	2	-	-	-	-	-	38	-	40	-
18-24 in	-	6	-	-	-	-	-	21	-	27	2
HENRY CO.											
He-1	-	-	-	-	17	-	-	92	7	109	7
He-2	-	-	-	-	15	-	-	128	8	143	8
LEE CO.											
Le-14	-	2	-	-	-	-	9	-	-	11	5
Le-17, Surface	-	46	67	-	-	-	45	-	-	158	25
Le-17, Cut A											
0-6 in	-	44	94	-	-	-	51	-	-	189	13
6-12 in	-	22	61	-	-	-	53	-	-	136	6
12-18 in	-	-	2	-	-	-	4	-	-	6	-
Le-17, Cut B											
0-6 in	-	4	2	-	-	-	10	-	-	16	-
6-12 in	-	-	7	-	-	-	12	-	-	19	12
12-18 in	-	-	2	-	-	-	5	-	-	7	-
18-24 in	-	-	-	-	-	-	-	1	3	1	3

TABLE 4.—Occurrence of shells from sites in southwest Virginia—Continued

Site and cut	<i>Cyclonaias tuberculata</i>	<i>Leptoxis subglobosa</i>	<i>Oxytrema simplex</i> and <i>O. autocarinata</i>	<i>Mudalia carinata</i>	<i>Oxytrema catenaria</i> <i>dislocata</i>	<i>Ambloxys crassulum</i>	<i>I. o.</i>	Unidentified gastropods	Unidentified pelecypods	Total gastropods	Total pelecypods
MONTGOMERY CO.											
My-3	-	-	-	-	-	-	-	16	2	16	2
My-7	-	-	-	-	-	-	-	3	6	3	6
My-8	1	-	-	4	-	-	-	-	8	4	9
My-11, 0-6 in	28	7	-	-	-	1	-	56	5	64	33
6-12 in	18	-	-	-	-	-	-	27	11	27	29
12-18 in	24	1	-	-	-	-	-	8	9	9	33
24-30 in	4	-	-	-	-	-	-	-	3	-	7
30-36 in	7	-	-	-	-	-	-	3	30	3	37
36-46 in	6	-	-	-	-	-	-	22	4	4	28
PATRICK CO.											
Pk-17	-	-	-	-	-	-	-	3	4	3	4
PULASKI CO.											
Pu-3, Surface	-	2	-	-	-	-	-	34	-	36	-
0-6 in	7	-	1	-	-	-	-	27	4	28	11
6-12 in	11	6	-	-	-	-	-	16	3	22	13
12-18 in	7	-	-	-	-	-	-	5	3	5	10
24-30 in	-	-	-	-	-	-	-	2	-	2	-
Pu-8A	11	2	-	-	-	-	-	9	4	11	15
Pu-8B	2	2	-	-	-	-	-	11	1	13	3
Pu-9, 12-18 in	16	-	-	-	-	-	-	2	-	2	16
24-30 in	15	-	-	-	-	-	-	2	1	2	16
30-36 in	2	-	-	-	-	-	-	-	-	-	2
RUSSELL CO.											
Ru-1	-	-	82	-	-	-	23	-	24	105	24
Ru-2, Surface	-	-	47	-	-	-	4	-	2	51	2
0-6 in	-	-	16	-	-	-	1	-	-	17	-
6-12 in	-	-	7	-	-	-	3	-	1	10	1
12-18 in	-	-	-	-	-	-	2	-	2	2	2
Ru-3A	-	-	195	-	-	-	47	-	-	242	28
Ru-3B	4	-	27	-	-	-	12	-	1	39	5
Ru-7	1	3	56	-	-	-	7	-	-	66	1
Ru-9	-	6	18	-	-	-	6	-	-	30	5
Ru-11	-	5	13	-	-	-	30	-	3	48	3
Ru-13	-	-	8	-	-	-	8	-	-	16	-
Sc-1	-	13	16	-	-	-	25	-	5	54	5
Sc-3	-	-	-	-	-	-	-	-	1	-	1
Sc-4	19	-	-	-	-	-	15	-	-	15	19
Sc-9	-	4	4	-	-	-	57	-	18	65	18



TABLE 4.—Occurrence of shells from sites in southwest Virginia—Continued

Site and cut	<i>Cyclonaias tuberculata</i>	<i>Leptoxis subglobosa</i>	<i>Oxytrema simplex</i> and <i>O. autocarinata</i>	<i>Mudalia carinata</i>	<i>Oxytrema catenaria</i> <i>dislocata</i>	<i>Ambloxis erasulum</i>	<i>Io</i>	Unidentified gastropods	Unidentified pelecypods	Total gastropods	Total pelecypods
SMYTH Co.											
Sm-4, Surface	-	49	42	-	-	-	-	-	7	91	7
0-6 in	-	20	12	-	-	-	-	-	-	32	-
6-12 in	-	13	19	-	-	-	-	-	2	32	2
Sm-5, Surface	-	12	42	-	-	-	-	-	-	54	-
0-6 in	-	47	54	-	-	-	-	-	1	101	1
Sm-7	-	29	52	-	-	-	-	-	1	81	1
Sm-8	-	25	14	-	-	-	-	-	-	39	-
Sm-9B	-	2	-	-	-	-	-	-	-	2	-
Sm-10A	-	18	11	-	-	-	-	-	1	29	1
Sm-10B, Surface	-	17	13	-	-	-	-	-	-	30	-
0-6 in	-	63	57	-	-	-	-	-	1	120	1
6-12 in	-	115	125	-	-	-	-	-	-	240	-
12-18 in	-	21	11	-	-	-	-	-	4	32	4
Sm-16	-	33	43	-	-	-	2	-	6	78	6
Sm-19	-	130	71	-	-	-	-	-	14	201	14
Sm-22	-	91	222	-	-	-	-	-	-	313	-
Sm-25	-	116	47	-	-	-	81	-	9	244	9
Sm-26, Surface	-	92	78	-	-	-	-	-	2	170	2
0-6 in	-	6	5	-	-	-	-	-	-	11	-
6-8 in	-	5	11	-	-	-	-	-	-	16	-
Sm-31	-	46	62	-	-	-	-	-	-	108	-
Sm-32	-	68	29	-	-	-	-	-	2	97	2
TAZEWELL Co.											
Tz-2	-	46	77	-	-	-	-	-	-	123	-
Tz-7	-	96	24	-	-	-	-	-	-	120	-
WASHINGTON Co.											
Wg-1	-	16	51	-	-	-	20	-	2	87	2
Wg-7	-	4	2	-	-	-	-	-	-	6	-
Wg-10	-	5	29	-	-	-	49	-	5	83	5
Wg-11	-	37	38	-	-	4	23	-	-	102	-
Wg-12	-	18	84	-	-	-	-	-	-	102	-
Wg-13	-	38	39	-	-	-	-	-	1	77	1
Wg-15	-	26	49	-	-	-	46	-	8	121	8
Wg-16	-	12	26	-	-	-	14	-	-	52	21
WYTHE Co.											
Wy-1	-	12	-	-	-	-	-	3	-	15	-
Wy-3	1	-	-	-	-	4	-	10	4	14	5
Wy-5	-	-	-	-	-	1	-	-	-	1	-
Wy-8	-	4	-	-	-	28	-	-	-	32	-



Plates 1-28





PLATE 1.—Soapstone boulders at Ca-8, some of which were fragments of aboriginal vessels. *a*, Boulders stacked as a modern fence. *b*, Quarry site located in the forest in back of the pile of boulders.



PLATE 2.—Site Gy-10. *a*, New River as seen from Gy-10. *b*, Close-up of the rockshelter.



PLATE 3.—Typical mound sites in southwest Virginia. *a*, The Carter Robinson mound, Le-10.  
*b*, The Ely mound excavated by Carr in 1877, Le-12.





PLATE 4.—Typical open sites in southwest Virginia. *a*, My-3 is the dark area in the plowed field.  
*b*, Pu-6 is within the trees beyond the white fence.





PLATE 5.—Typical open sites in southwest Virginia. *a*, Sm-9B is beyond the unplowed strip in the foreground. *b*, Sm-11B is beyond the most distant haystack while Sm-11A is approximately within the area of the haystacks.



PLATE 6.—Views of Site Sm-10B. *a*, Persons in center of site beginning strata cut. *b*, Features found in the excavation.



PLATE 7.—Views of Site Sm-25. *a*, Remaining portion of the site is on the bank in front of the houses.  
*b*, Close-up of aboriginal pit near the foot of the tower.





PLATE 8.—General view of Clinch River Valley. *a*, Site Tz-1 is at the left.  
*b*, Site Tz-1, between fence and barn.



PLATE 9.—Archeological sites in Tazewell and Washington Counties, southwest Virginia. *a*, Remains of the disturbed burial cairn, Tz-9. The flat stones in the foreground outline the site. *b*, North Fork of the Holston in the foreground with site Wg-15 on the secondary terrace beyond.

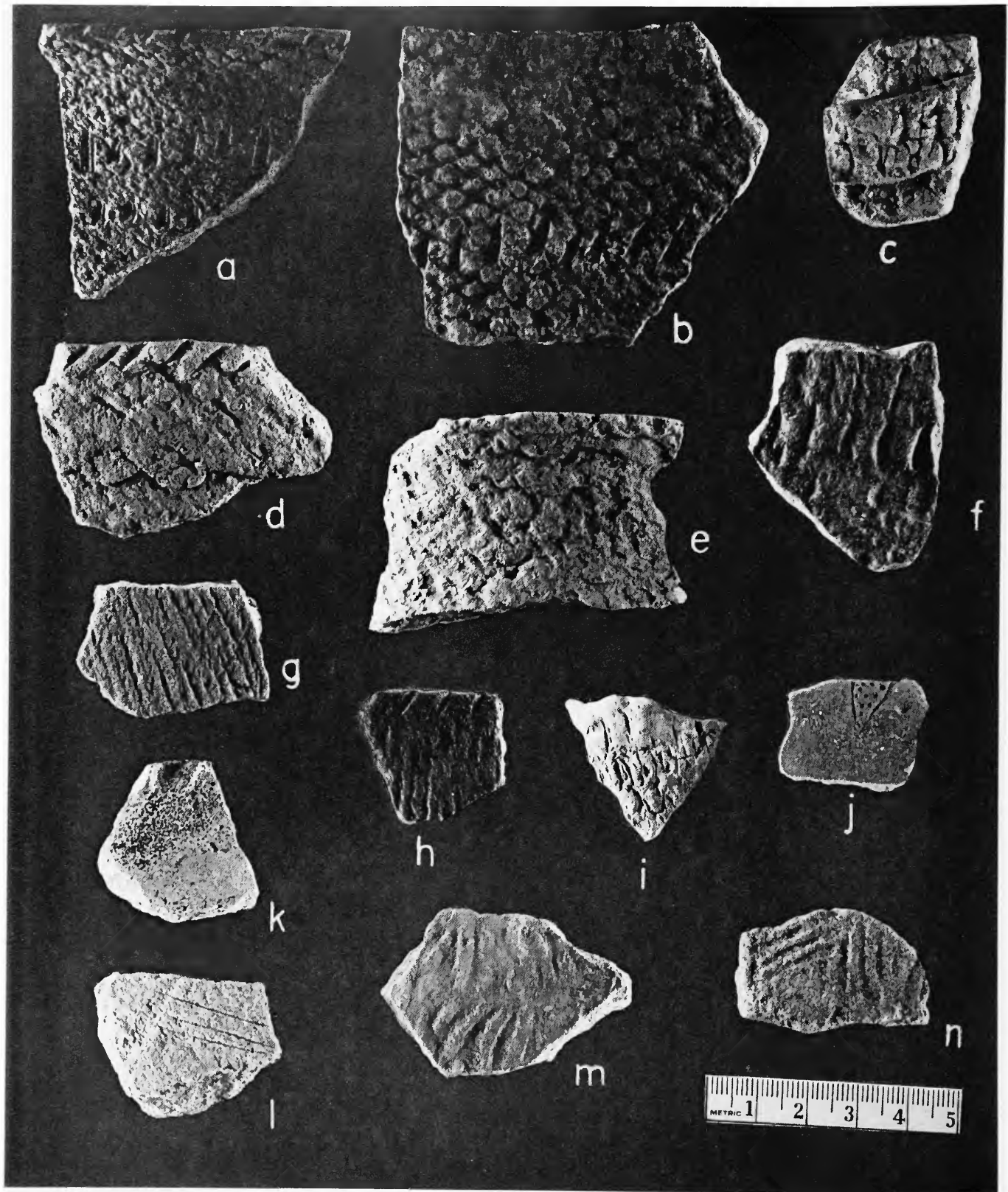


PLATE 10.—Pottery types of Dan River Series. *a-e*, Dan River Net Impressed. *f-h*, Dan River Cordmarked. *i*, Dan River Corncob Impressed. *j-l*, Dan River Plain. *m, n*, Dan River Stamped.



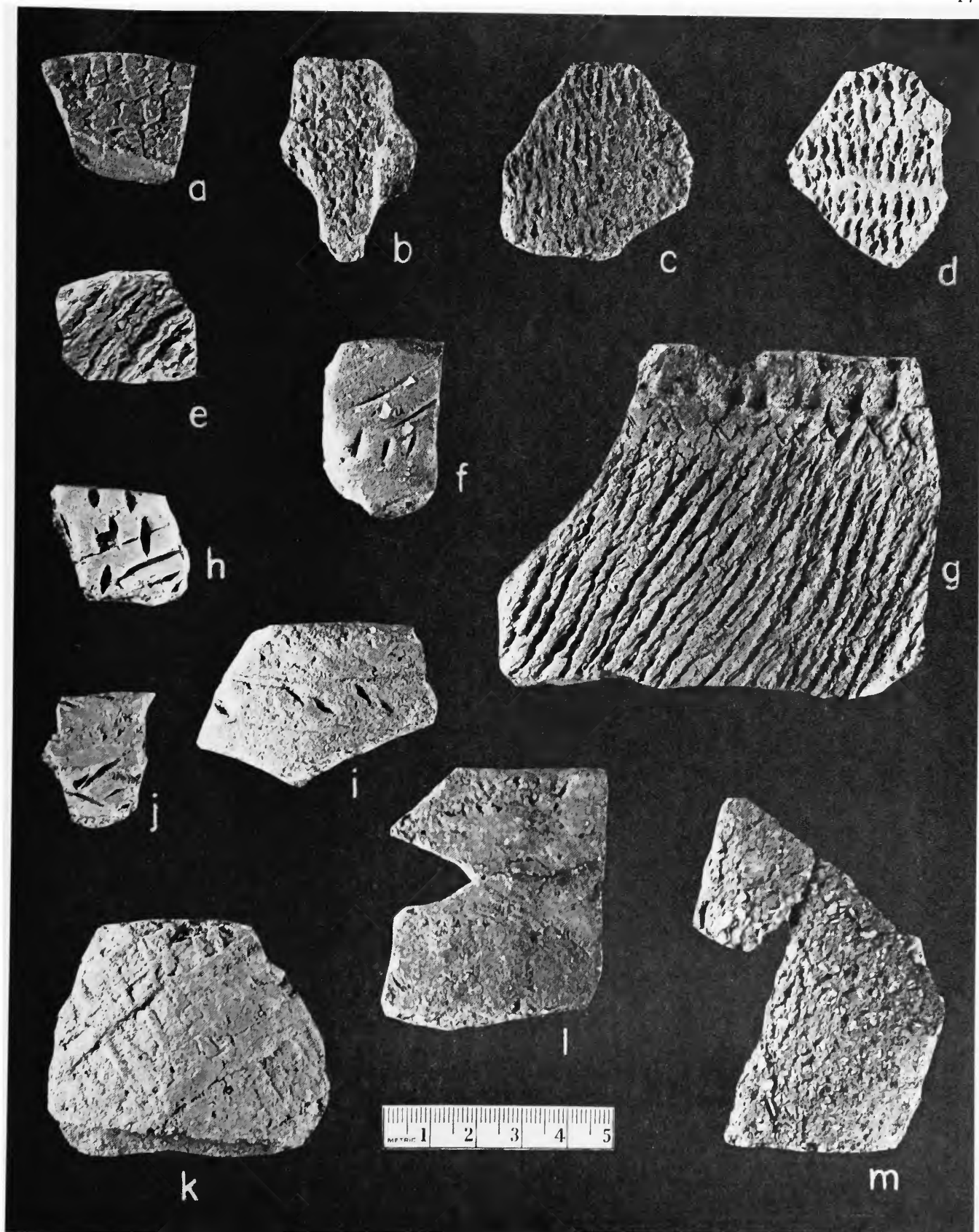


PLATE 11.—Pottery types of Grayson Series and unclassified mica-tempered sherds. *a, b*, Grayson Net and Knot Roughened. *c, d*, Grayson Fabric Impressed. *e, g*, Grayson Cordmarked. *f, h-j*, Grayson Plain. *k*, Grayson Checked Stamped. *l, m*, Unclassified mica temper.

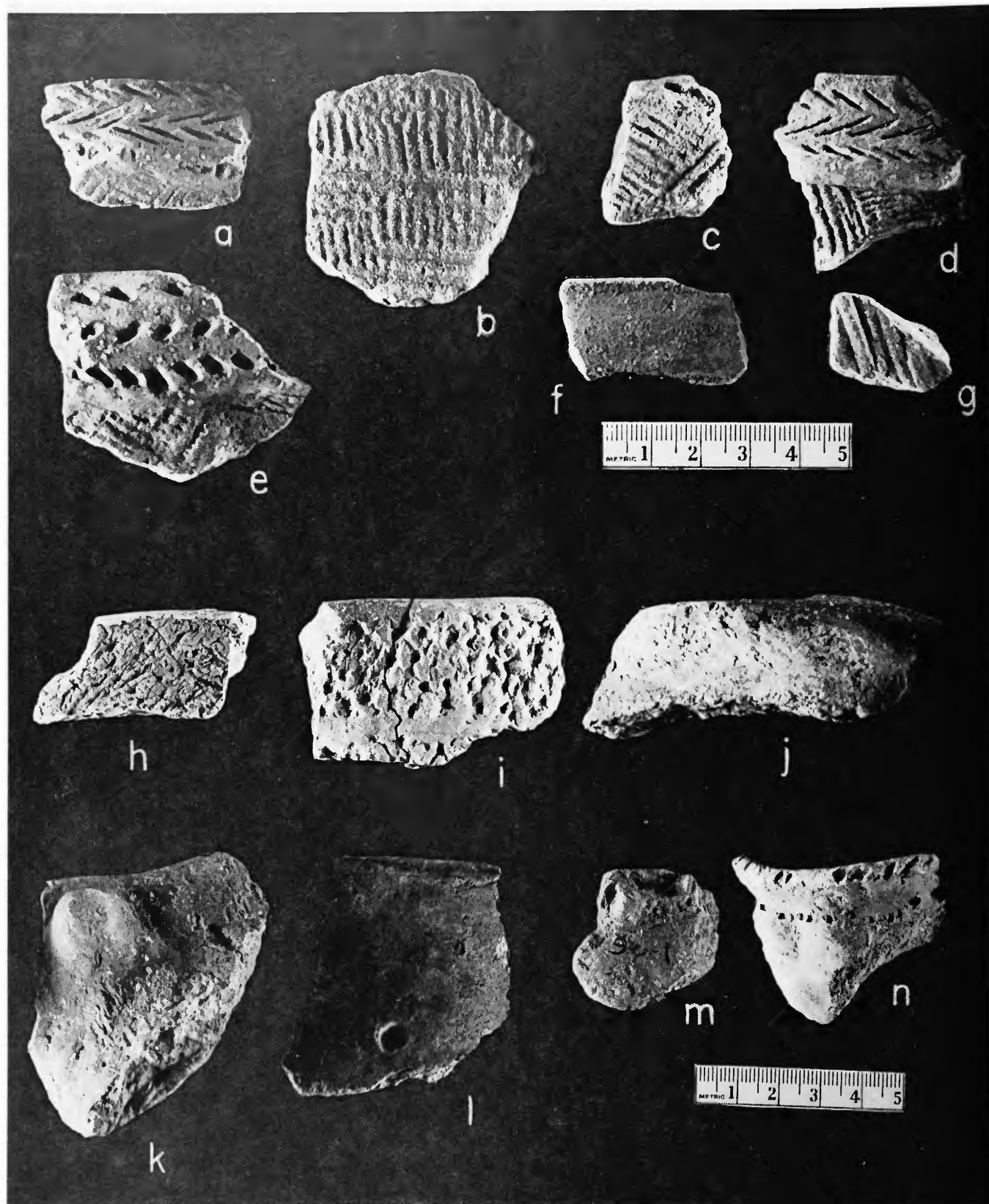


PLATE 12.—Pottery types of Lee and New River Series. *a-g*, Lee Series sherds: *a, d, e*, Rimsherds of Lee Linear Stamped. *b, c*, Body sherds of Lee Linear Stamped. *f*, Rimsherd of Lee Plain. *g*, Lee Simple Stamped. *h-n*, New River Series sherds: *h-i*, New River Knot Roughened and Net Impressed. *j-n*, New River Plain.



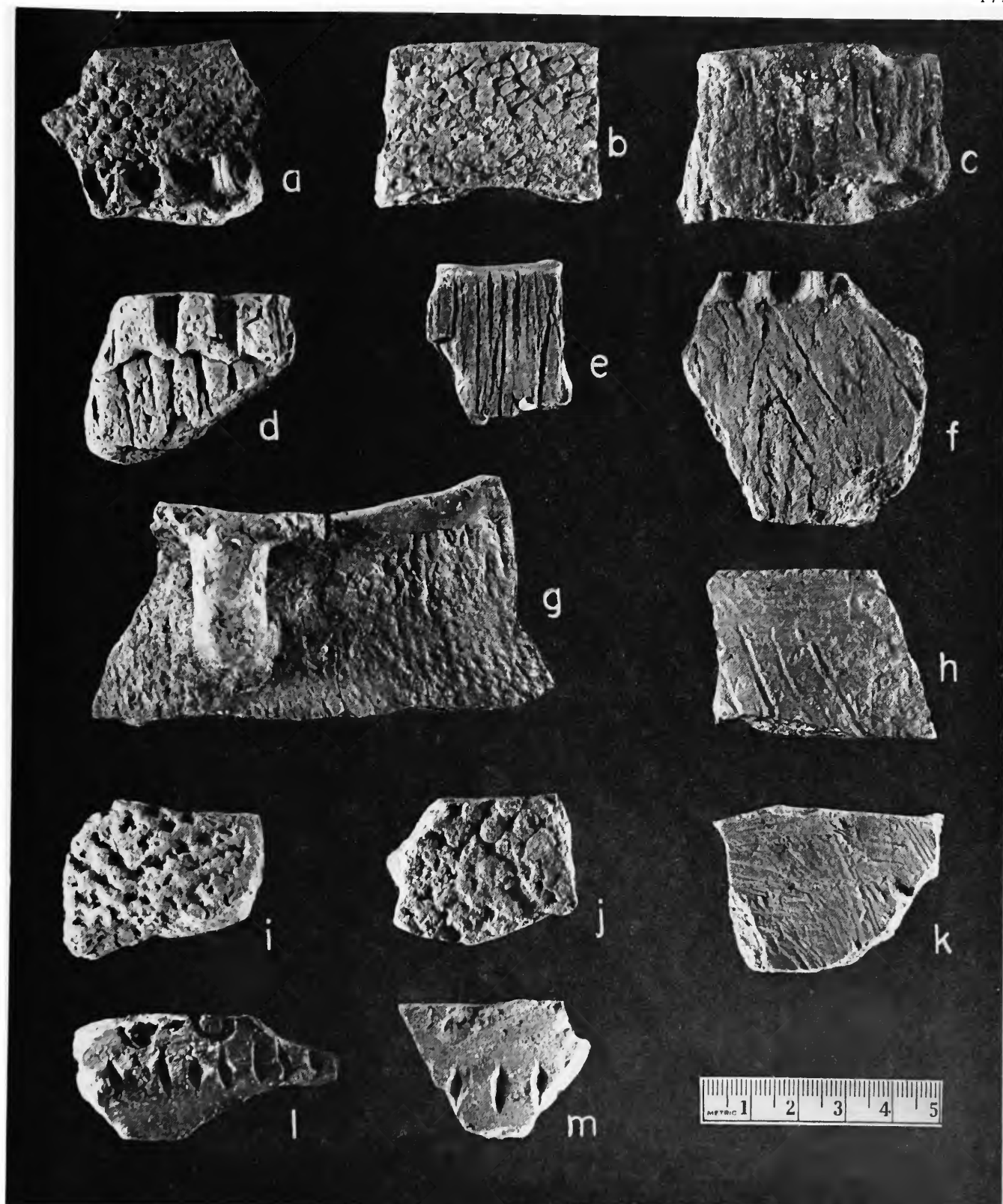


PLATE 13.—Pottery types of Radford and Smyth Series. *a, b*, Radford Knot Roughened and Net Impressed. *c-f*, Radford Cordmarked. *g*, Radford Fabric Impressed. *h*, Radford Plain. *i, j*, Smyth Net and Knot Roughened. *k*, Smyth Scraped. *l, m*, Smyth Plain.

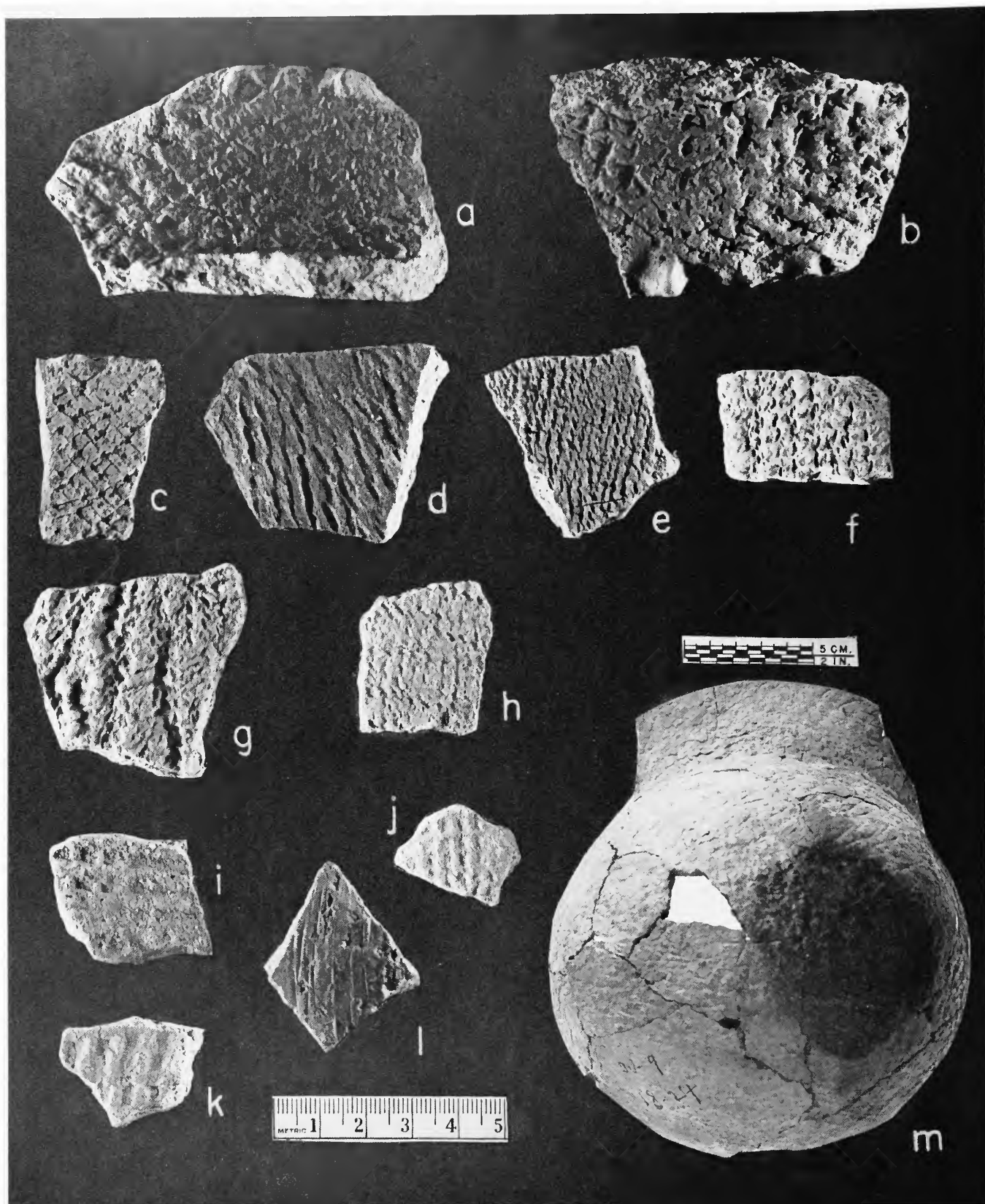


PLATE 14.—Pottery types of Wythe Series. *a-c*, Wythe Net and Knot Roughened. *d, e*, Wythe Cord-marked. *f-h*, Wythe Fabric Impressed. *i-k*, Wythe Stamped. *l*, Wythe Scraped. *m*, Wythe Net and Knot Roughened pot.

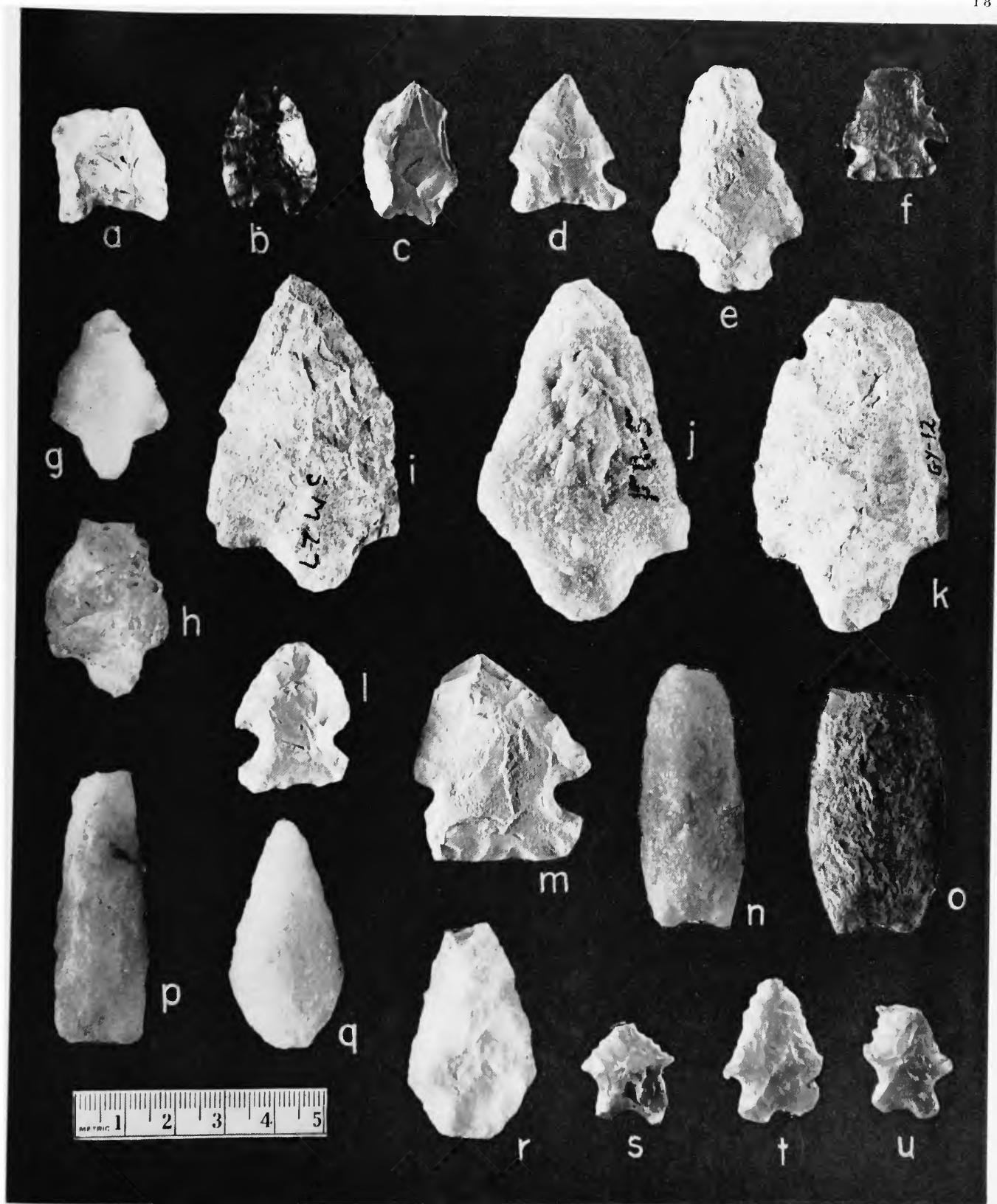


PLATE 15.—Projectile point types. *a*, Dalton point. *b*, *c*, Wheeler Incurvate points. *d*, Hardaway Sidenotched point. *e*, Stanly Stemmed point. *f*, Palmer Corner Notched point. *g*, *h*, Morrow Mountain II points. *i*–*k*, Morrow Mountain I points. *l*, Big Sandy Sidenotched point. *m*, Cache Diagonal Notched point. *n*–*p*, Typical Guilford Lanceolate points. *q*, *r*, Rounded base Guilford Lanceolate points. *s*–*u*, Bifurcated Base points.

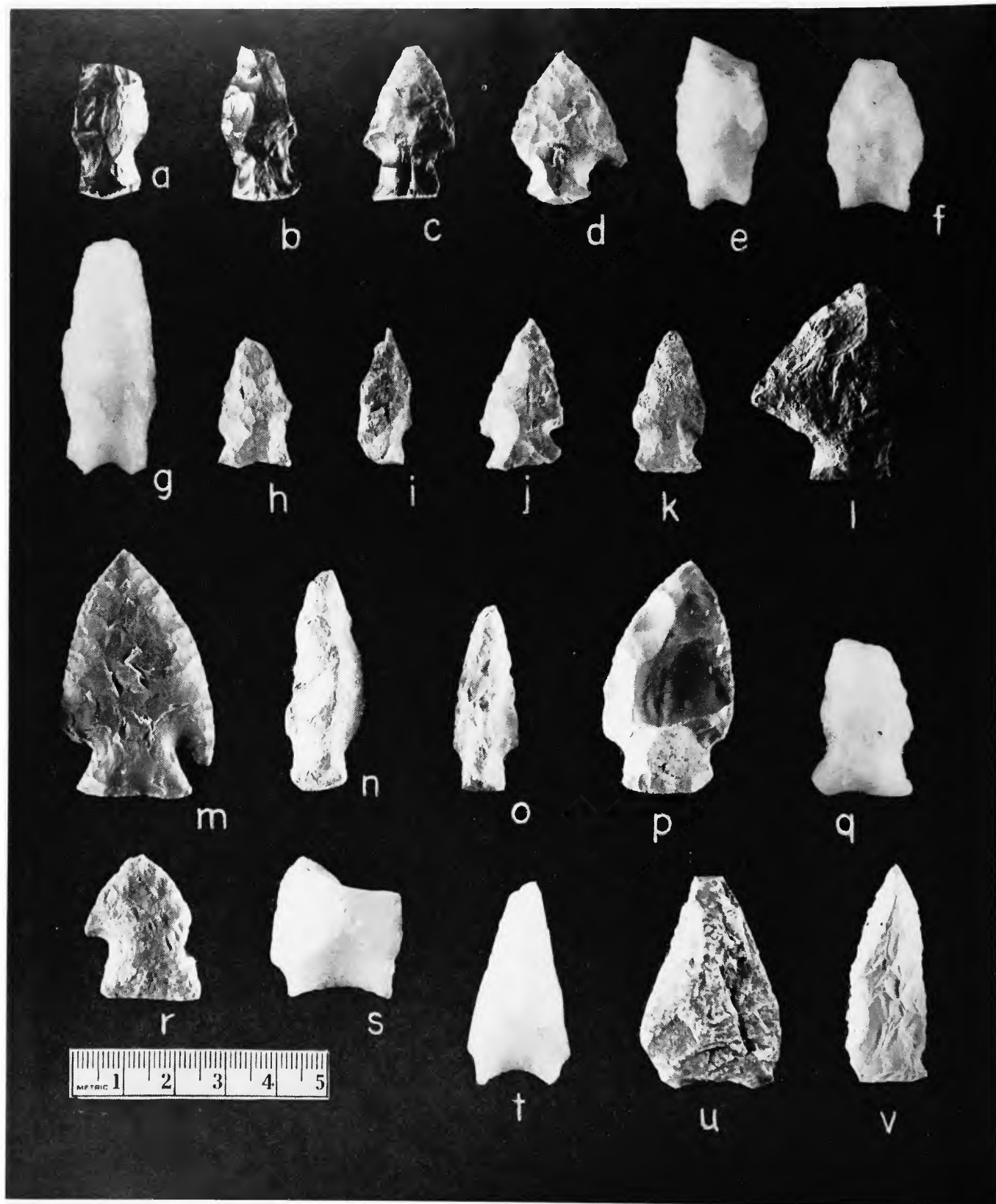


PLATE 16.—Projectile point types. *a-d*, Lamoka points. *e-g*, Patrick Indented Base points. *h-k*, Merom Expanding Stemmed points. *l*, Perkiomen Broad Spear point. *m*, Pulaski Corner Notched point. *n*, Bradley Spike. *o*, Riverton Stemmed point. *p*, Saratoga Parallel Stemmed point. *q*, Halifax Sidenotched point. *r*, Lowe Flared Base point. *s-u*, Potts points. *v*, Upper Valley Sidenotched point.

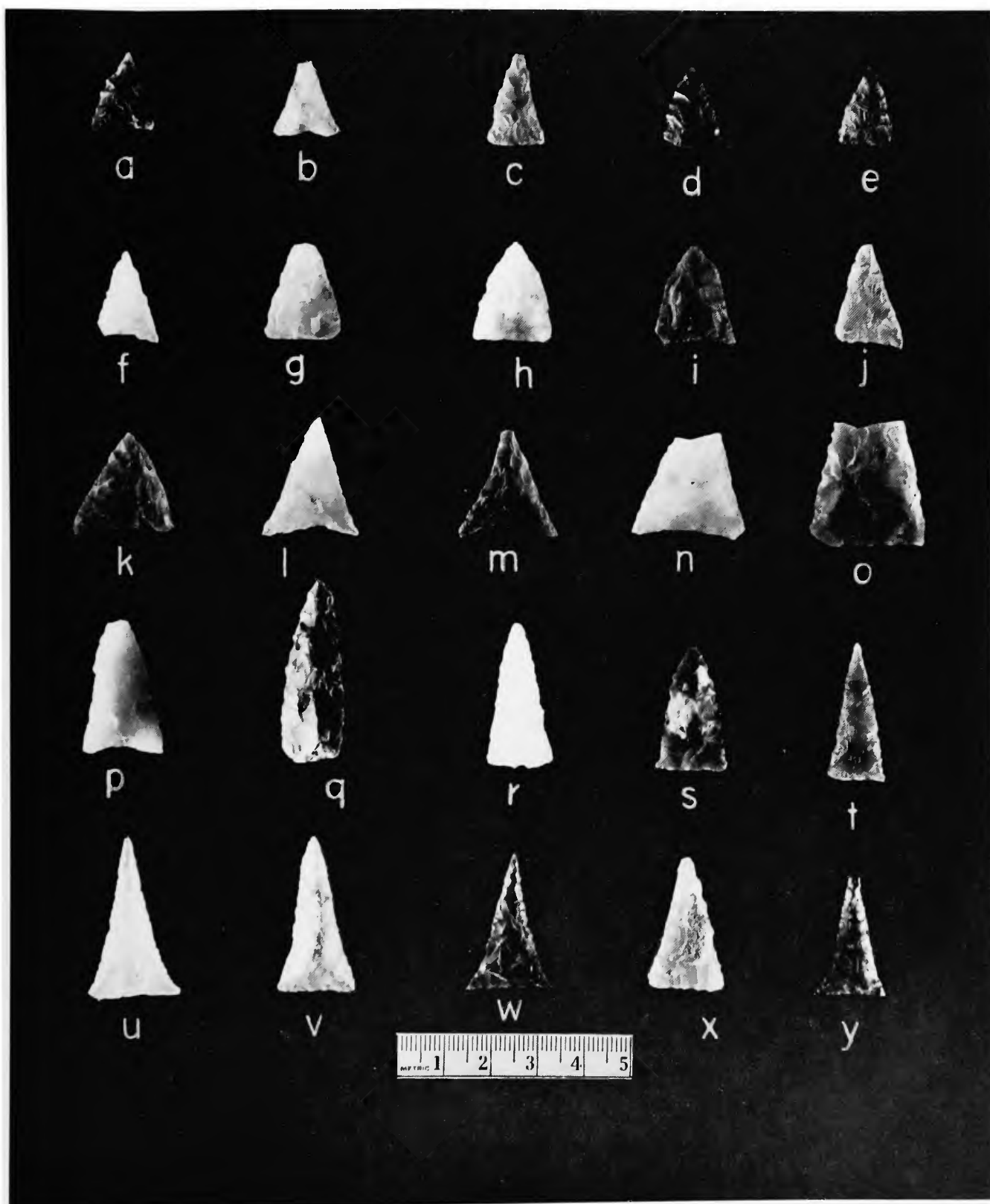


PLATE 17.—Projectile point types. *a-e*, Clarksville Small Triangular points. *f-j*, Madison Triangular points. *k-o*, Levanna Triangular points. *p-t*, Dallas Triangular points. *u-v*, Hamilton Triangular points.



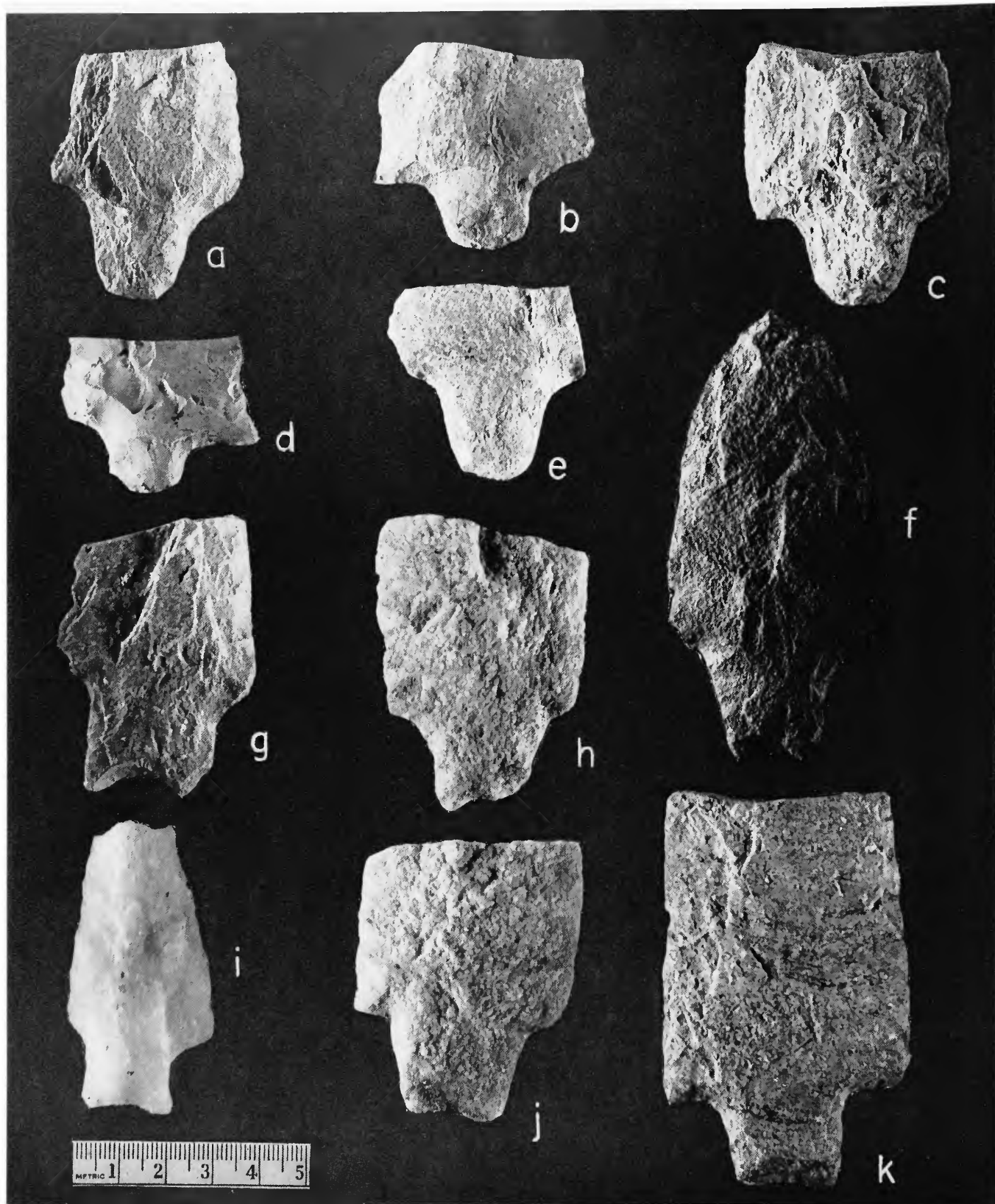


PLATE 18.—Projectile point types. *a-e*, Ledbetter points. *f-k*, Savannah River Stemmed points.

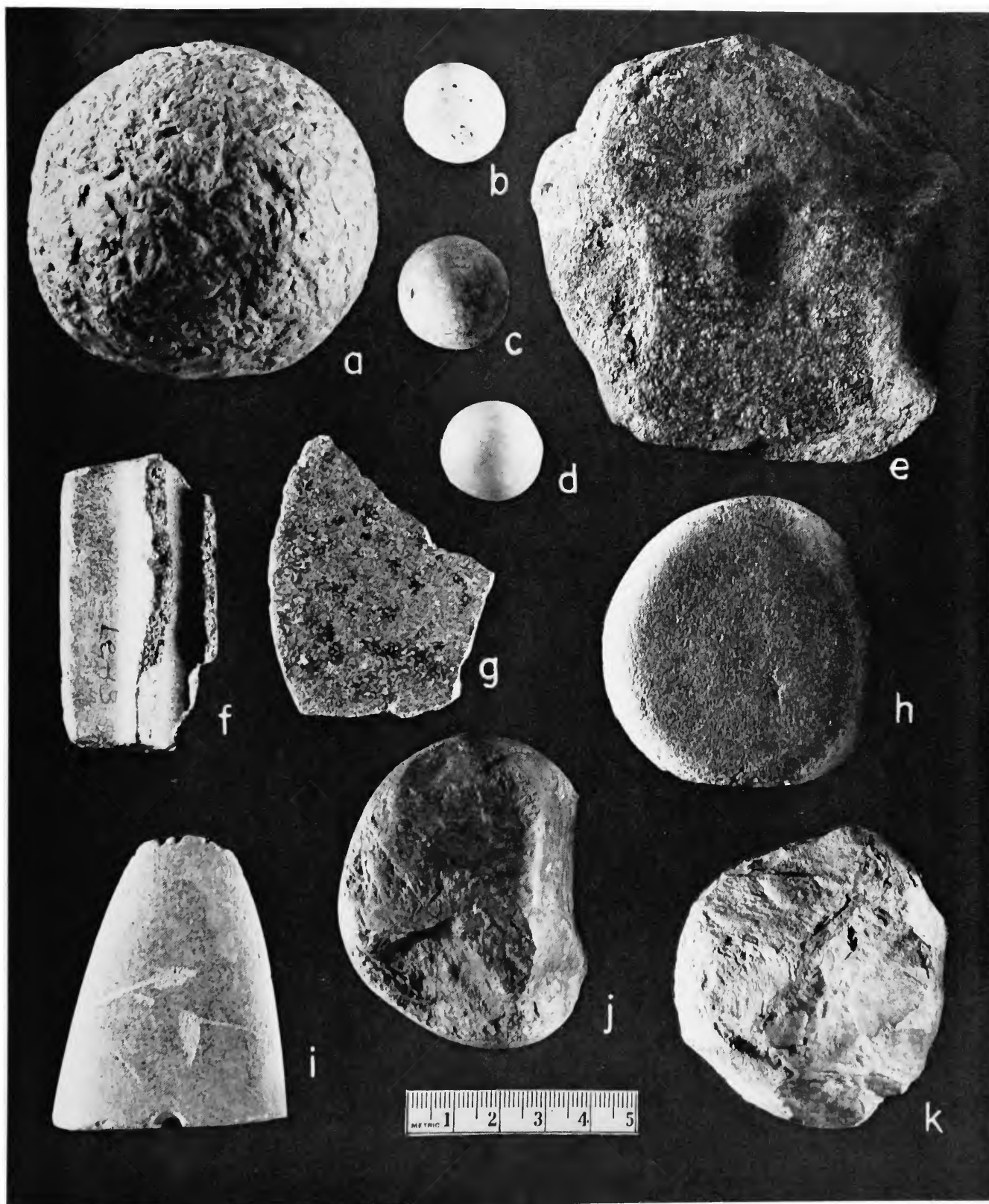


PLATE 19.—Stone artifacts. *a-d*, Stone balls. *e*, Pitted hammerstone-millingstone. *f-g*, Atlatl weight fragments. *h, j, k*, Hammerstone-millingstones. *i*, Pendant from Le-14.



PLATE 20.—Bone artifacts. *a-c*, Ulna awls. *d*, Bone spokeshave. *e*, Antler flaker. *f*, Bone awl.



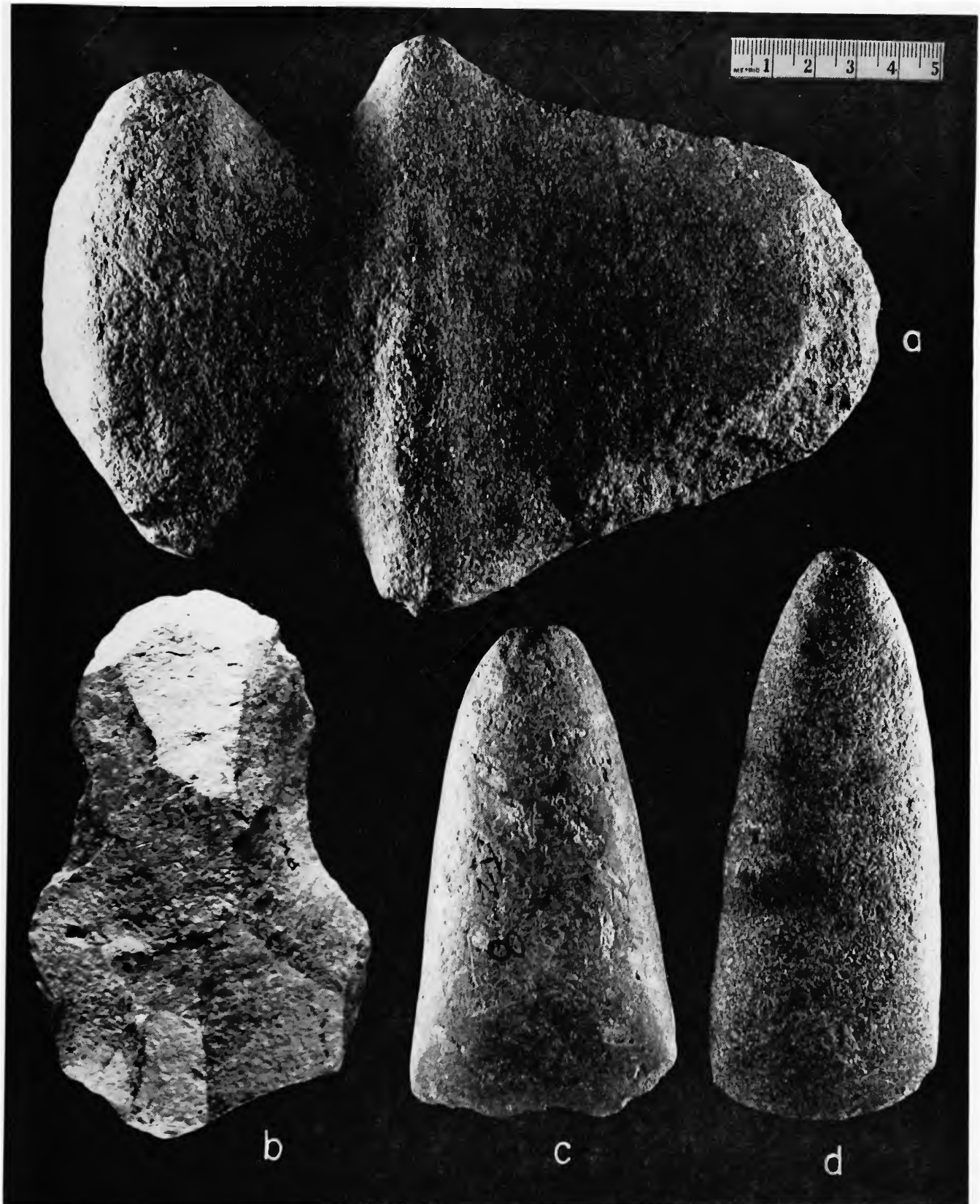


PLATE 21.—Stone artifacts. *a*, Fully grooved ax. *b*, Guilford ax. *c-d*, Large celts.

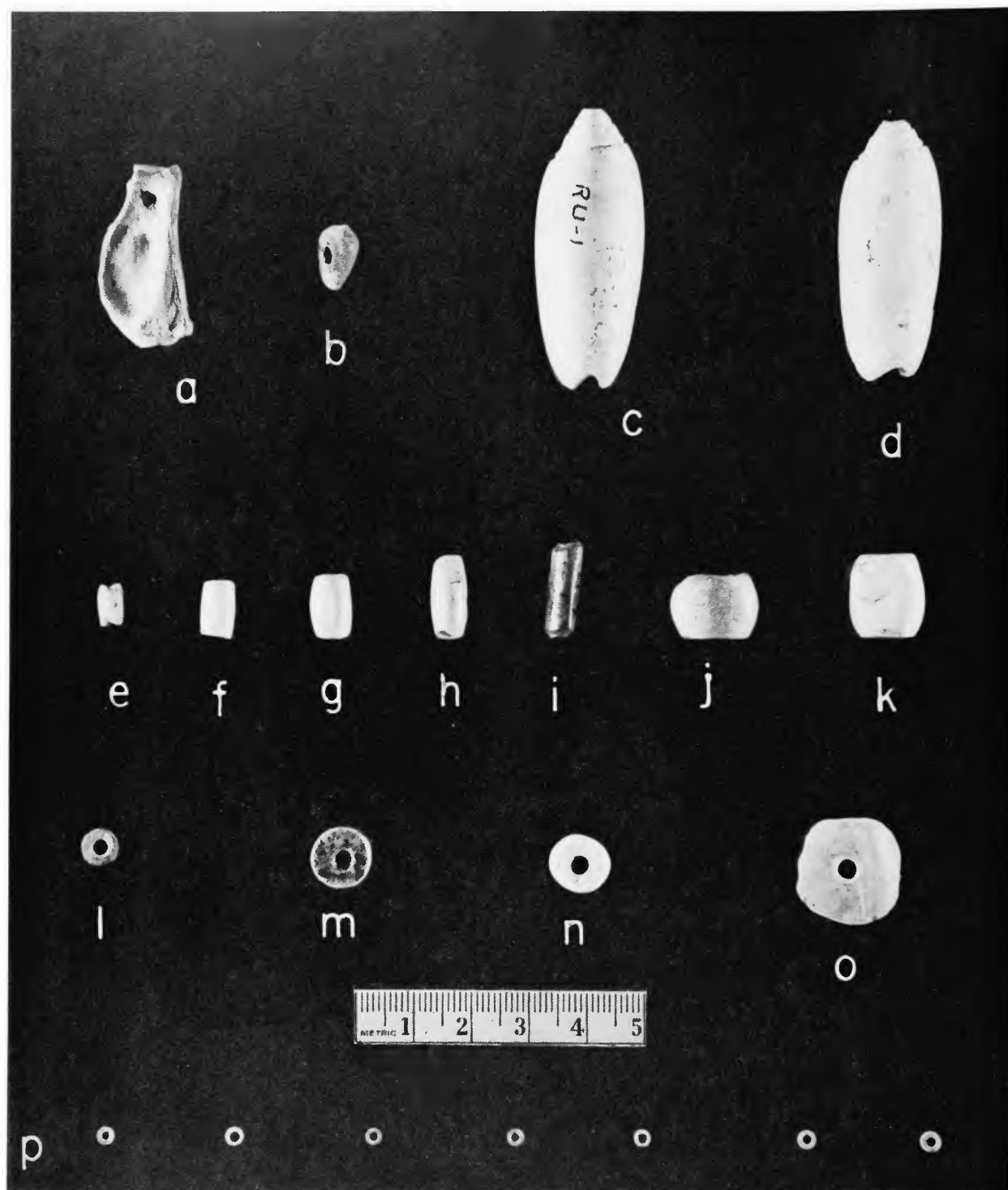


PLATE 22.—Bone and shell ornaments. *a*, Drilled turkey wing tip. *b*, Marginella shell bead. *c*-*d*, Oliva beads. *e*-*h*, *k*, Tubular shell beads. *i*-*j*, cut-bone beads. *l*-*o*, Large Shell disk beads. *p*, Small shell beads.

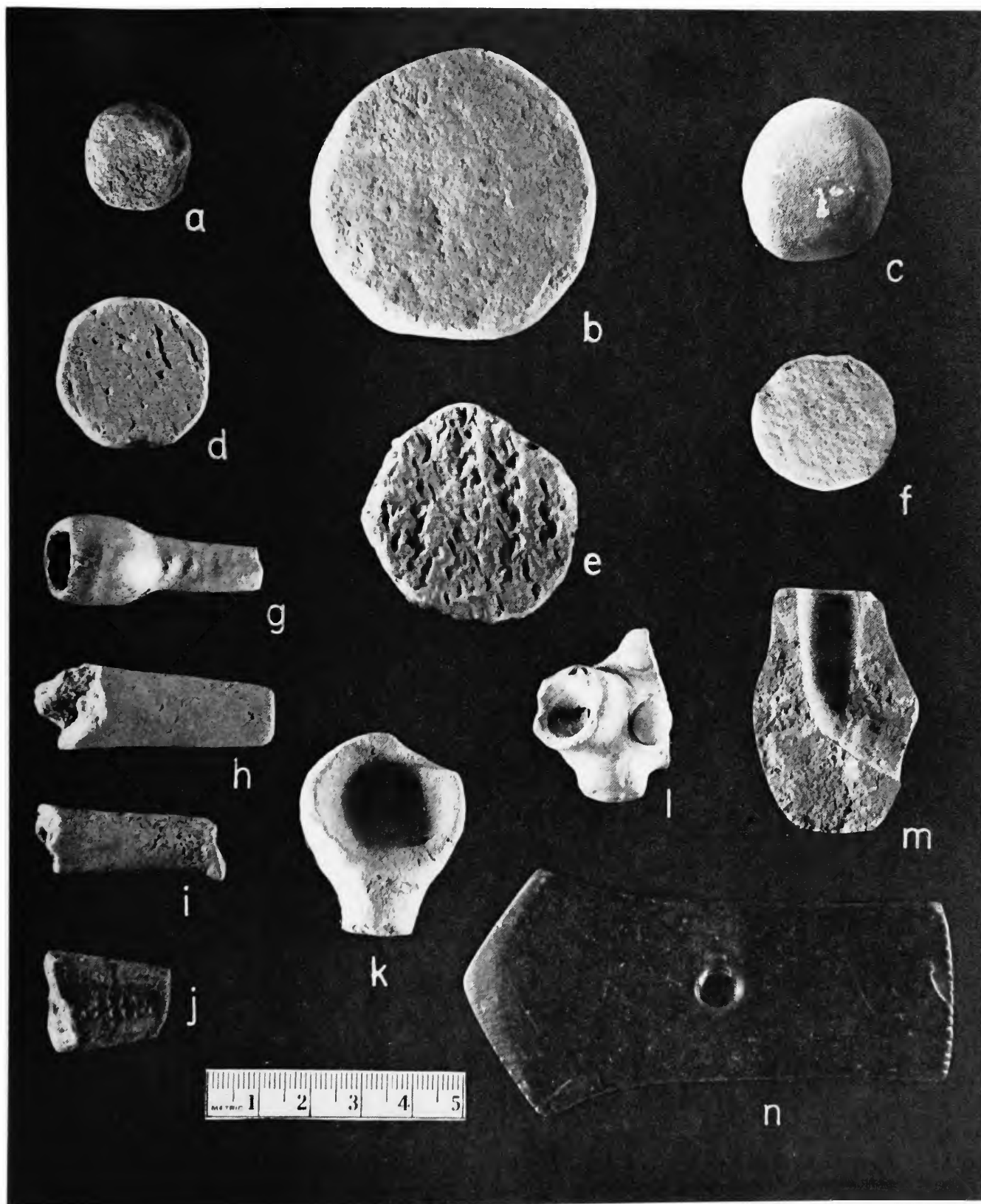


PLATE 23.—Miscellaneous artifacts. *a-c*, Stone disks. *d-f*, Pottery disks. *g-j, l*, Clay pipes. *k*, Clay spoon. *m*, Stone pipe. *n*, Pendant from Tz-8.

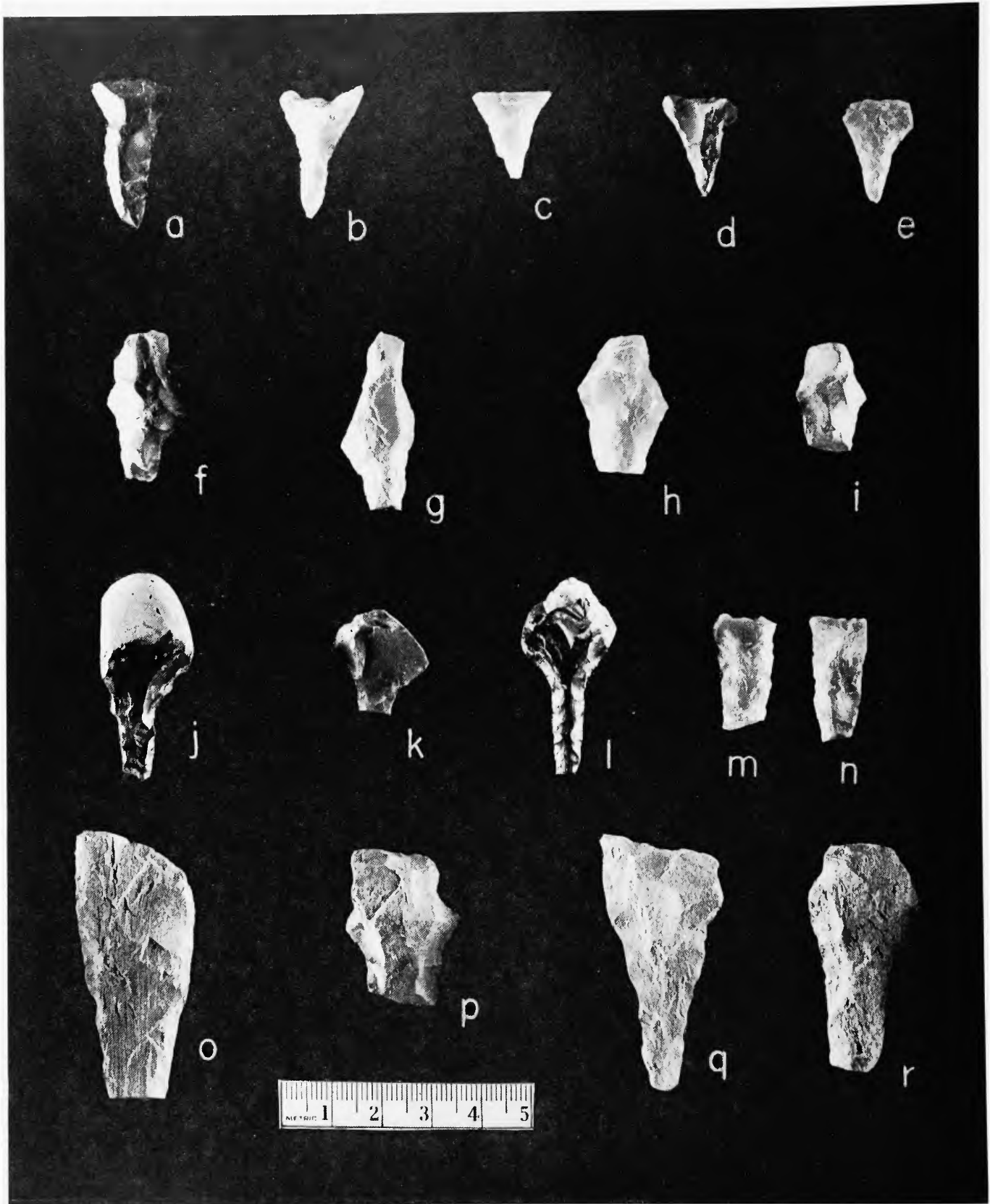


PLATE 24.—Drill types. *a-e*, Type I. *f-i*, Type III. *j-l*, With unmodified hafts.  
*m, n*, Type I. *o-r*, Type II.

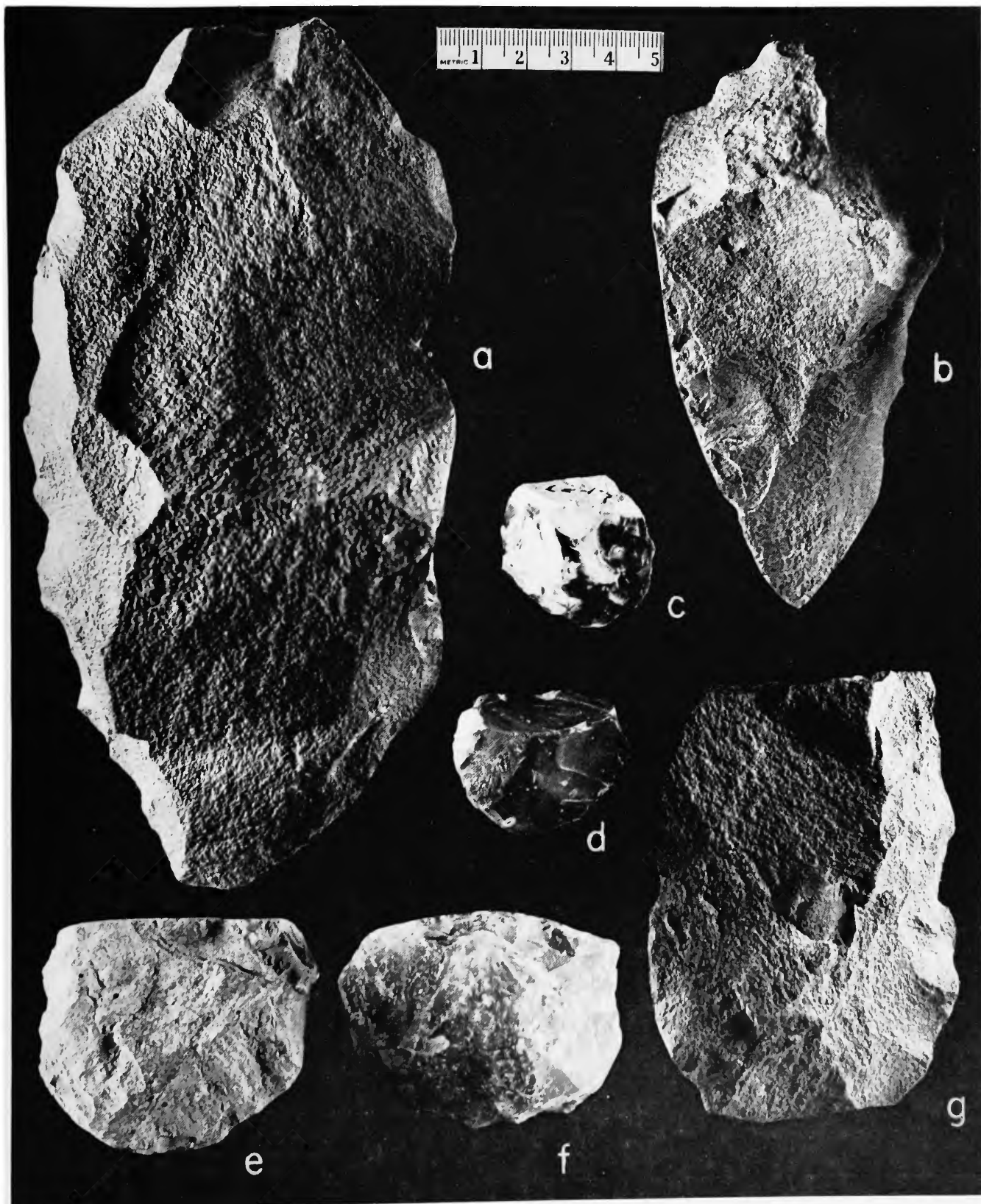


PLATE 25.—Percussion-made stone artifacts. *a-b*, Gouges. *c-g*, Hand choppers.



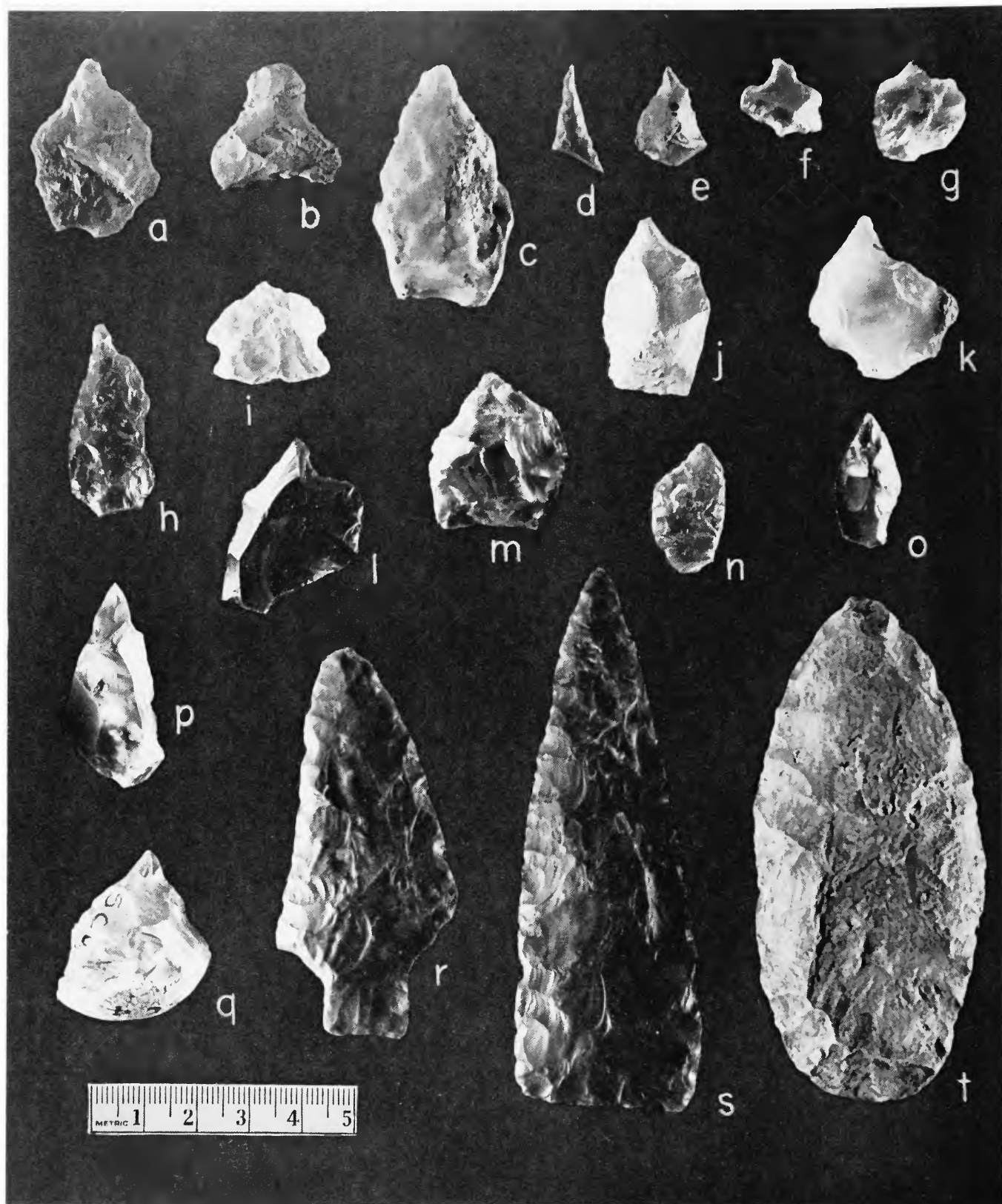


PLATE 26.—Chipped stone artifacts. *a-c, n-q*, Reamers. *d, e*, Microperforators. *f-g, k-m*, Flake graters. *h-j*, Graters with projectile point base. *r-t*, Burial goods from Tz-8.

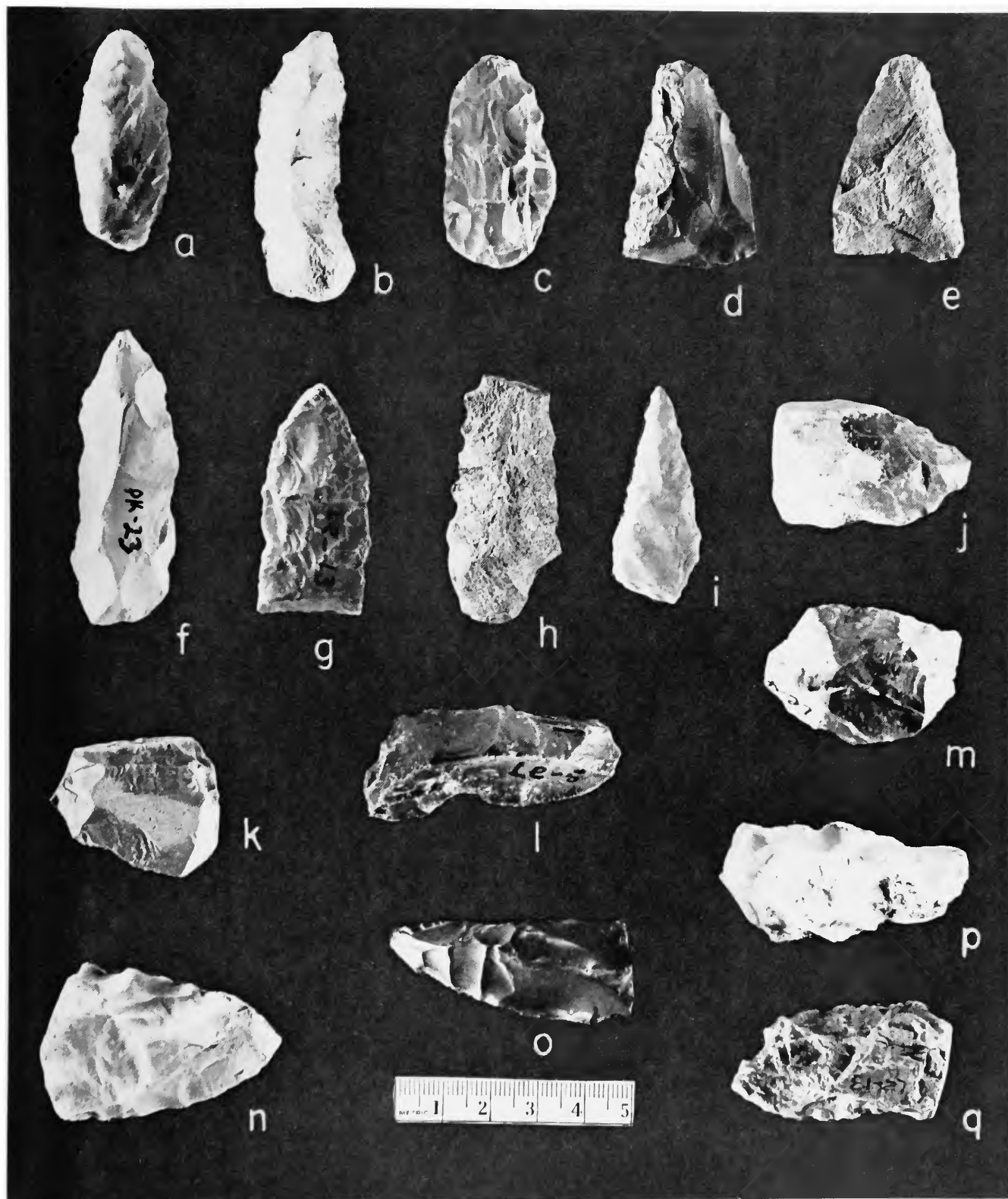


PLATE 27.—Stone knives. *a-i*, Unbacked knives. *j-q*, Backed knives.

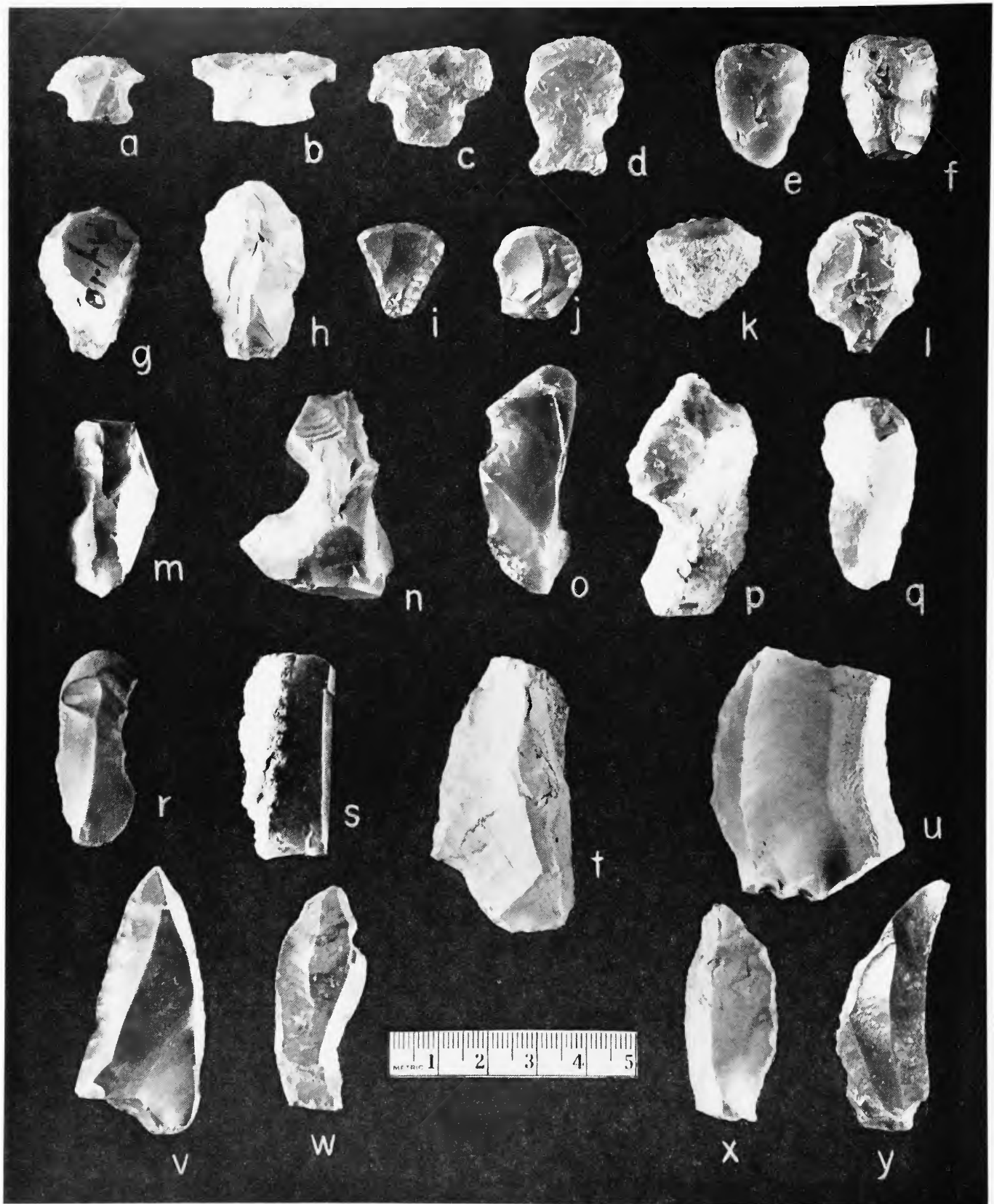


PLATE 28.—Stone scraping implements. *a-d*, Hafted scrapers. *e, f*, Biface scrapers. *g-l*, Uniface scrapers with *l* showing a graver spur. *m-p*, Stone spokeshaves. *q-x*, Used lamellar flakes, all are side scrapers. *y*, unused lamellar flake.



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