CHAPTER SIX

Paleoindian and Early Archaic in the Lower Southeast: A View from Georgia

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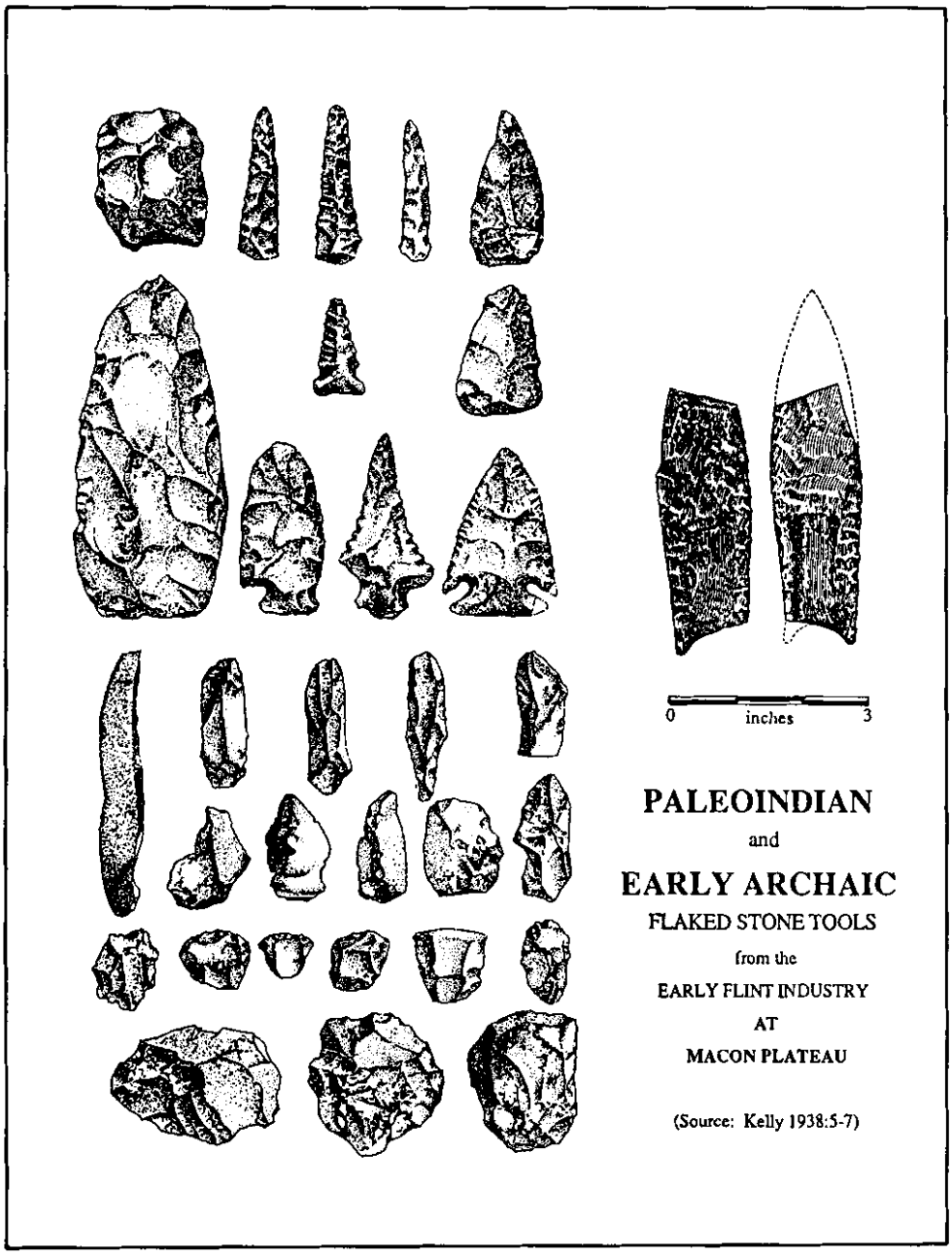
WHILE THE MACON PLATEAU site is best known for its monumental late prehistoric mounds and earth lodges, it is fitting that a discussion of Paleoindian and Early Archaic research should be included in this volume. Although it is not widely known, the first Paleoindian fluted projectile point found in secure excavation context in the eastern United States, and recognized for what it was, came from the Macon Plateau site. While fluted points had been previously described in Mississippi in the 1920s (Brown 1926:132–34), where they were called Coldwater points, at the time their great age was not known. The Macon discovery occurred in 1935, the same year that Bushnell (1935:35) drew attention to the existence of surface finds of fluted points in Virginia. The original discovery in Folsom, New Mexico, where the presence of a fluted projectile point between the ribs of an extinct form of bison had finally and incontrovertibly demonstrated the co-occurrence of humans and extinct late Pleistocene fauna, had occurred only nine years previously, in 1926 (Figgins 1927). The Dent site excavations, where the first indisputable association of early hunters with mammoth was found, was even more recent, having taken place only three years before, in 1932 (Figgins 1933). At the time of the Macon excavations, furthermore, fieldwork was underway at both Black Water Draw and Lindenmeier, classic western Paleoindian sites further demonstrating the contemporaneity of early man with extinct Pleistocene fauna and, at Black Water Draw, the relative ages of Clovis and Folsom points (Hester 1972; Wilmsen and Roberts 1978). During stratigraphic excavations on Macon Plateau in 1935, relief workers under the direction of A. R. Kelly found a large Clovis projectile point fragment and a number of other stone tools, all heavily weathered, in the deepest levels. Antonio J. Waring, who at the time was an undergraduate student with a strong interest in archaeology, has described the discovery of the Macon fluted point, and the excitement it generated: "Dr. A. R. Kelly in 1935, back in the happy wasteful old days of WPA archaeology, was excavating the area just west of the Council Chamber at the Ocmulgee Fields site near Macon. Deep in the weathered tan sand, well below pottery, he was finding considerable evidence of an early flint industry. . . . In controlled excavation, in a pre-pottery context, he found about two-thirds of a fine, large fluted point (Kelly 1938, p. 7). I personally just missed the discovery and then spent the summer sitting on the edge of the excavations in the forlorn hope that more fluted points would be found" (Waring 1968a:237).

The early flint industry at Macon was described in Kelly's (1938c:2–8) *Preliminary Report on Archeological Explorations at Macon, Georgia.* Kelly (1938c:2, 3) noted the discovery of "several thousand worked flints" from a probable "early hunter people" in the lower levels of a number of the units that were opened. The early stone tool assemblage, in clear preceramic context, occurred over a wide area, and was characterized by large numbers of specialized scrapers and flake cutting tools and, as noted above, a single well-made Clovis point (Figure 6.1). A number of Early Archaic side- and corner-notched Bolen and Palmer/Kirk points were also found in this same horizon, however, and we now know that both Paleoindian period (ca. 11,500 to 10,000 years before present, or B.P.) and succeeding Early Archaic period



6.1. Early stone tools from the 1930s excavations on the Macon Plateau. (Reproduced from Kelly 1938c Figure 3.5.)

(ca. 10,000 to 8000 B.P.) components were present, mixed together (that is, conflated) on an old ground surface.

Several dense concentrations of heavily patinated chert were noted within the scatter that were interpreted as flint knapping areas. "A progressive increase in mean patination from [the] original plateau surface to the lower soil zones" (Kelly 1938c:5) was reported, although unfortunately it was not possible to separate the earlier Paleoindian from the later Early Archaic materials, which were equally heavily weathered. To this day, extensive patination on local cherts is considered a good indicator of early components in the general region (for example, Goodyear and Charles 1984:5; Michie 1977:19). The celebrated Macon Plateau fluted point, important not only as a testament to the first inhabitants of Georgia, but also in the history of eastern North American archaeology, is displayed just inside the front door of the visitor's center at Ocmulgee National Monument. Only the one fluted point was found at the Macon Plateau site, in spite of a massive excavation effort directed to their discovery. The 1935 investigations were thus the first of many that followed documenting an apparent scarcity of fluted points on most sites of this time level in the lower Southeast. In all the years since the Macon find, only a handful of other Clovis

points have been found in secure excavation context in Georgia, one each at the Muckafoonee Creek, Rucker's Bottom, Taylor Hill, and Theriault sites (see below). This pattern, markedly different from that observed in the Plains and in the Northeast, where dense kill sites have been reported, has prompted some investigators to suggest that Paleoindian populations in large parts of the Southeast were highly mobile, generalized foragers who only rarely stayed in any given area long enough to leave behind the kind of artifact concentrations that archaeologists associate with sites (Meltzer 1984:354).

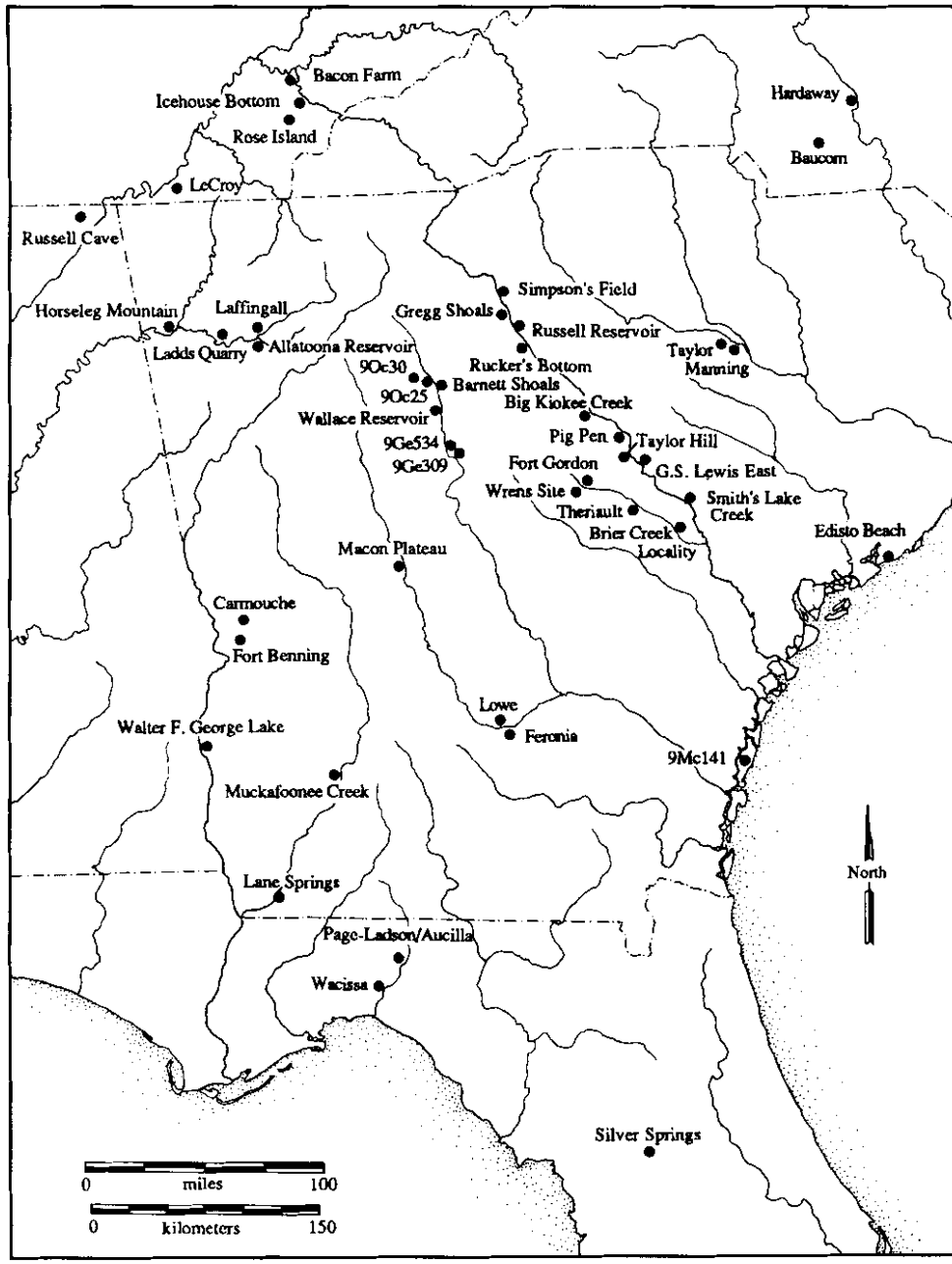
Although the excavations on Macon Plateau represented some of the first modern work undertaken on eastern Paleoindian, very little follow-up research on sites or assemblages of this period was done in Georgia for over 40 years. While Kelly's preliminary statement provided some information, the early materials from the Macon Plateau site have never been fully analyzed or described, rendering them, like many of the later assemblages from the locality, shrouded in a mystery of the archaeological profession's own making. The Macon Clovis find did prompt some local interest in these early occupations, however, and after 1935 reports of Georgia fluted points did appear from time to time (Waring 1968a:237–38). In 1952, for example, Caldwell (1952: figure 167) illustrated several Georgia fluted points that were in the Smithsonian Institution collections, including a number from Big Kiokee Creek near Augusta, where a major site may have been present. In 1966 Wauchope (1966:99–100) described a number of isolated, presumably Paleoindian points found during a major WPA-era survey conducted in north Georgia. The actual age and identity of these artifacts, however, now known only from photographs, line drawings, and brief descriptions, will remain uncertain until the original materials (now apparently lost or misplaced) can be found and reexamined.

In 1968 Waring's (1968a) posthumous paper summarizing the first thirty years of Paleoindian research in Georgia appeared. Waring described in detail his nearly lifelong interest in the subject, particularly his attempt to find fluted points in private collections from around the state. The Brier Creek area in the eastern part of the state, with its rich chert quarries, was inferred to have been visited or settled quite early. At least one major site, which had yielded from ten to fifteen fluted points, was reported to have been present within this drainage, near Wrens, although unfortunately the location was never divulged by the collector who found it (Waring 1968a:237–38). Prior to 1986, however, no systematic effort at recording information about Paleoindian artifacts occurred, and any notes or other data that may have existed on most of these early point finds (save for those placed at the Smithsonian, the University of Georgia Laboratory of Archaeology or in other responsible curatorial repositories) have since been lost. Fortunately, over the past few years the documentation of Georgia's early occupants has attracted substantial interest. The multiple authorship of this paper reflects the extent of this interest. Much of this recent work, briefly recounted here, has been summarized in a monograph entitled *PaleoIndian Period Archaeology of Georgia* that interested readers may wish to examine (Anderson et al. 1990a).

Trends in Paleoindian/Early Archaic Research in the Lower Southeast Since 1938

Prior to the mid-1970s, excavations at late Pleistocene/Early Holocene sites were rare in the lower Southeast. The best-known work occurred at rockshelters such as Stanfield Worley and Russell Cave in Alabama (DeJarnette et al. 1962, Griffin 1974); at stratified floodplain or upland sites such as Doerschuk and Hardaway in North Carolina (Coe 1964) or Taylor and Thom's Creek in South Carolina (Michie 1969, 1971); or at underwater sites such as those near Silver Springs in Florida (Rayl 1974) (Figure 6.2). Since the mid-1970s there has been an explosion in both fieldwork and knowledge, much of it the result of cultural resource management (CRM)-mandated research. Large-scale excavations have occurred, not only at rockshelters but also at stratified floodplain or colluvial sites such as Rose Island, Ice House Bottom, and Bacon Farm in eastern Tennessee (Chapman 1973, 1975, 1977, 1978); at the Haw River and Baucom sites in North Carolina (Claggett and Cable 1982; Peck and Painter 1984); at Smith's Lake Creek, G. S. Lewis, and Nipper Creek in South Carolina (Anderson and Hanson 1988; Goodyear and Charles 1984; Sassaman et al. 1990; Wetmore 1986; Wetmore and Goodyear 1986); and at the Gregg Shoals, Rae's Creek, and Rucker's Bottom sites in Georgia (Anderson and Schuldenrein 1983, 1985; Crook 1990; Tippitt and Marquardt 1984). This work has led to considerable refinement of the local chronological sequence, and to well-grounded attempts to determine the kinds of activities that occurred in these settings. The contemporaneity of early human populations with extinct Pleistocene fauna in the region has been demonstrated at sites such as Little Salt Springs and Wacissa River in Florida, where perishable materials have been found that would have been lost on terrestrial sites (Clausen et al. 1979; Webb et al. 1984).

Coupled with this excavation activity, there has been a tremendous increase in site distributional data. Literally thousands of Paleoindian and Early Archaic components, identified by the presence of diagnostic hafted bifaces, have been reported from the Georgia, South Carolina, and North Carolina area in recent years (for example,



6.2. Major Late Pleistocene/ Early Holocene archaeological sites and localities in the Georgia area.

Anderson et al. 1979, 1990a; Anderson and Schuldenrein 1983; Davis and Daniel 1990; Goodyear et al. 1979, 1989; O'Steen 1983; O'Steen et al. 1989; Peck 1988; Sassaman et al. 1990). In South Carolina, for example, Hanson (n.d.) tabulated data on more than 1,000 Early Archaic components using data in the state site files and collections, and comparable numbers of components undoubtedly exist in Georgia and North Carolina. While the marked increase in knowledge in recent years is primarily due to CRM-mandated survey and excavation activity, contributing factors have included an increased awareness of the research potential of private collections (for example, Charles 1981, 1983, 1986) and the strong interest by local avocational archaeologists in the well-made artifacts that characterize these early periods.

In recent years, furthermore, fluted point surveys have been initiated in almost every state and province in eastern North America, and a high level of amateur and professional interaction centers around this kind of effort (see Brennan 1982, Meltzer 1988, and Anderson 1990a for recent summaries of this work). In addition to large-scale excavations at major early sites, more limited survey and evaluation-related testing and surface collection has also occurred at thousands of other locations across

the region, again almost all because of CRM-mandated funding. The increased fieldwork, and the strong interest in early assemblages among both the avocational and professional archaeological communities, has led to a marked expansion in our knowledge about the location and content of early assemblages in the region. In the pages that follow, the results of some of this work are presented, particularly as they relate to our understanding of the initial human occupation of the area we now call Georgia.

Paleoenvironmental Setting

The initial human occupation of Georgia is thought to have occurred between 11,500 and 11,000 years ago, during the terminal Pleistocene or Late Glacial era. Sea levels at this time were 70 or more meters lower than at present, and the Atlantic and Gulf coastal plains were much larger. The period was one of dramatic environmental change. As the continental ice sheets retreated in the north, their water returned to the oceans, inundating large sections of the continental shelf, until by 9000 B.P. sea level was within a few meters of its present stand. Over this same interval, seasonal temperature fluctuations were becoming more extreme (that is, warmer in summer and colder in winter), and precipitation was increasing (Watts 1980; Holman 1982, 1985).

When the ice sheets were retreating in the north, from ca. 12,000 to 10,000 years ago, hardwoods such as hemlock, oak, hickory, beech, birch, and elm began to replace the Full Glacial spruce/pine boreal forest that had been present earlier in northern Georgia (Delcourt and Delcourt 1985, 1987). The local vegetational matrix was thus rapidly changing, trending from a patchy boreal forest/parkland toward a more homogeneous, mesic oak-hickory forest. This transition appears to have been completed by shortly after 10,000 B.P. (M. Davis 1983: 172–73; Delcourt and Delcourt 1985:19; Larsen 1982: 208–22; Watts 1971:687, 1980:195). South of 33° N latitude, roughly the latitude of Macon, a mesic oak-hickory hardwood canopy appears to have been in place considerably earlier, and perhaps was present throughout the glacial era. The late Pleistocene and early Holocene periods in southern Georgia thus appear to have been characterized by fairly stable regional vegetational communities. The pine and scrub hardwoods now present in the interfluvial uplands and the extensive cypress swamps along the rivers emerged later, however, during the Hypsithermal Interval from 8000 to 4000 B.P. (Brooks et al. 1986; Delcourt and Delcourt 1985, 1987).

Widespread extinctions, specifically the loss of at least 33 genera of large mammals, including the *Equidae* and *Camelidae* (horses and camels), and all the members of the order *Proboscidea* (elephants) also occurred at the end of the Pleistocene (Martin 1984:361–63). These extinctions were apparently complete by ca. 10,500 years ago (Mead and Meltzer 1984:447), shortly after widespread evidence for human settlement appears in the New World archaeological record. The relationship between these human and animal populations, specifically whether the early settlers were responsible for the observed extinctions, is a matter of considerable controversy (Martin and Klein 1984). While human predation of now-extinct late Pleistocene fauna has been conclusively demonstrated at a number of locations in the Southwest and on the Great Plains, to date only minimal evidence for this kind of activity has been recovered in eastern North America (Clausen et al. 1979; Webb et al. 1984). At present, while human populations may have contributed to the demise of these animal species, the mechanisms by which this occurred, such as over-hunting, the firing of habitats, or disease, remains unknown.

Paleoindian Assemblages from the Georgia Area

Terminal Pleistocene assemblages in Georgia can now be provisionally grouped into three subperiods, the Early, Middle, and Late Paleoindian (Anderson et al. 1990a: 6–9). The Early Paleoindian subperiod is thought to date from ca. 11,500 to 11,000 B.P., and is characterized by fluted points similar to the traditional Clovis form. The points are relatively large and thick with nearly parallel haft edges, slightly concave bases, and single or multiple flutes. The Middle Paleoindian subperiod is thought to date from ca. 11,000 to 10,500 B.P., and is characterized by smaller fluted points and fluted or unfluted points with exaggerated constrictions of the haft. Some temporal overlap of these forms is probable, and it is also possible that some Middle Paleoindian forms continued in use into the Late Paleoindian subperiod, dated from ca. 10,500 to 10,000 B.P. and recognized by the presence of Dalton points. These Late Paleoindian points are characterized by a lanceolate blade outline, at least in the earliest stages of tool life, and a concave base that is usually well thinned and ground on the lateral and basal margins. Blade edges may be incurvate, straight, or excurvate, and are serrated in most examples, while cross sections tend to be flattened and biconvex. The evidence for extensive resharpening on many Daltons indicates technological differences in the use of these bifaces compared with earlier Paleoindian points (Goodyear 1974; Morse 1971, 1973).

Excavation Assemblages

Evidence for Paleoindian occupation in the Georgia area has come from both surface and excavation context. Unfortunately, while substantial numbers of early artifacts

have been found in surface context, the excavation assemblages recovered to date have, for the most part, consisted of either small numbers of artifacts or else comparatively few diagnostic projectile points. This is the case even where extensive excavation has occurred. At the Theriault chert quarry site along Brier Creek, for example, a single fluted point was found at a depth of 75 to 86 cm, just above the sterile clay, in an excavation block encompassing 142 square meters (Brockington 1971:29). A single fluted point was found at the Rucker's Bottom site on the upper Savannah River in an excavation block 160 square meters in extent (Anderson and Schuldenrein 1985:289–96).

While such large-scale block excavations as those at Macon Plateau, Theriault, and Rucker's Bottom have thus far been unsuccessful and frustrating, dense Paleoindian assemblages have been found during test excavations at two locations in Georgia, at the Taylor Hill and Muckafoonee Creek sites. Taylor Hill is a stratified Archaic and Paleoindian site covering approximately 40 ha of cultivated land on an elevated portion of the Savannah River floodplain near Augusta, in Richmond County (Elliott and Doyon 1981). The site was originally documented and surface collected by George Lewis of the Augusta Archaeological Society, and a series of later visits by professional archaeologists confirmed the extreme significance of the area (Bowen 1979; Elliott and Doyon 1981; Ferguson and Widmer 1976). Although the site is very large, only a small portion has been subjected to close study, an area within a proposed railroad right of way, where testing occurred in 1980 (Elliott and Doyon 1981). This field program included the controlled surface collection of an 18,100-square-meter area and the excavation of 12 small test units totaling 45 square meters, opened using 10 cm levels and 0.25 inch mesh screens. Shortly after the testing, federal funding for the proposed railroad was cut, and excavation plans were shelved.

Well-preserved Early Archaic and Late Paleoindian deposits were found at depths of from 30 to 70 cm below the surface at Taylor Hill. The density of material recovered from the site is extremely high: 565 tools were found in the 12 test units, including one Clovis, one fluted preform, two Daltons, three side-notched Bolens or Taylors, and four corner-notched Palmers (Elliott and Doyon 1981: 149). Given the high diversity of flake tools and the variety of raw materials present, the site has been interpreted as a residential base (Elliott and Doyon 1981) or possibly a specialized camp (Anderson and Hanson 1988). The site is in an ideal location for settlement, on the Fall Line ecotone between the Piedmont and Coastal Plain. The area is rich in both biotic and lithic resources, and may have been an aggregation locus, where early populations rendezvoused periodically. Taylor Hill is perhaps the richest and best-preserved Paleoindian site now known in Georgia and, since it is threatened by the expansion of Augusta, deserves to be either preserved or extensively excavated (Anderson et al. 1990a:29–30, 108).

The Muckafoonee site is a stratified Archaic and Paleoindian deposit situated on a terrace of Muckafoonee Creek in Dougherty County in southwestern Georgia (Elliott 1982). The site lies just north of the confluence of Muckafoonee Creek and the Flint River, and covers approximately 1.0 ha (2.5 acres). Located in the Coastal Plain, the area is underlain by the chert-rich Flint River formation, and stream sediments include materials from this geologic stratum. Major chert outcrops, in fact, occur both to the southeast, further down the Flint River, and nearby along Muckafoonee Creek.

Two deep backhoe trenches and three test units were opened at Muckafoonee. The test pits, opened in 10-cm levels and screened through 0.25-inch mesh, included two 1-m-by-1-m squares and one 2-by-2-m square. Late Archaic to Paleoindian materials were found stratified in the 90 cm of alluvial deposits that were examined, with the Early Archaic and Paleoindian artifacts occurring from 60 to 90 cm. The only diagnostic artifact recovered, an Early or Middle Paleoindian fluted projectile point, came from the 70-to-80-cm level. By far the most abundant artifact category in the lower three levels at Muckafoonee was chert debitage (6,407 specimens, or 99.1 percent of the total lithic assemblage from these levels), all of local origin. The vast majority of the debitage consisted of interior flakes, suggesting that initial core reduction occurred elsewhere, probably at the nearby outcrops. The Paleoindian/Early Archaic levels also contained 59 tools, most derived from intermediate and late-stage biface manufacture, which appears to have been the dominant activity performed at Muckafoonee. The fieldwork at the site, although limited, provides an initial picture of early chert quarry utilization in southwestern Georgia. Like Taylor Hill, this site deserves further investigation.

Minor later Paleoindian components have also been found during excavations at a number of other sites in Georgia in recent years (see Anderson et al. 1990a:26–43, for a summary of this work). At the Lowe site along the Ocmulgee River, for example, Crook (1987:51–54) found a Dalton point at a depth of 93 cm, along with several Early Archaic side- and corner-notched points higher in the deposits. At the Pig Pen site along the Savannah River near Augusta, Ledbetter (1988) found several lanceolate and Paleoindian forms, as well as a number of Early Archaic points, unfortunately most in surface context. At the Rae's Creek site, also near Augusta, Crook (1990) documented over four meters of stratified deposits, with the lowest levels dating to the late Paleoindian/initial Early Archaic periods. The Early through Late Archaic radiocarbon chronology from Rae's Creek is one of the finest ever obtained in the Southeast.

Piedmont Georgia Paleoindian Settlement—The Wallace Reservoir Locality

Several Paleoindian components were found in testing operations in and near the Wallace Reservoir along the upper Oconee River during the 1970s (O'Steen et al. 1989). The extensive fieldwork associated with the construction of the Wallace Reservoir, which was cleared and then intensively surveyed, makes this part of the central Oconee the most thoroughly examined archaeological locality in Georgia (Fish and Hally 1986). The assemblage data was used to prepare a model describing Paleoindian settlement in the Georgia Piedmont, the only model advanced to date locally for sites of this period.

The Oconee watershed has a dendritic stream drainage pattern incised into the underlying volcanic and metamorphic bedrock. Shoals and broad areas of floodplain occur at irregular intervals along the Oconee, while soils in the uplands are characteristically red clay derived from weathered granite, gneiss, and schist. The stream drainage pattern and lithic resources in the study area are essentially unchanged since Paleoindian times, although changes in the character of the Oconee floodplain have occurred (Brook 1981). The rate of erosion of the upper ridge slopes and subsequent sedimentation in the floodplains has been accelerated by historic land use, with the result that in some areas over one meter of sediment has been deposited in the past two centuries (Trimble 1974). Stone resources available within the Piedmont portion of the drainage include quartz and chert formed by nonsedimentary processes (Ledbetter et al. 1984); sedimentary cherts occur farther south along the Oconee drainage in the Coastal Plain province.

The Wallace Reservoir survey included a full surface reconnaissance of a 4,670-hectare clearcut encompassing upland and floodplain areas in the proposed floodpool (Fish and Hally 1986), plus an intensive, systematic backhoe testing program in the floodplain (Ledbetter 1978). Additional survey data from the surrounding region has been acquired from a series of subsequent upland surveys in and near the reservoir (for example, Elliott 1984; O'Steen 1986), through work by the U.S. Forest Service in the nearby Oconee National Forest (Wynn 1982:95), and from interviews with private collectors (Elliott 1978). Ninety-one Paleoindian sites yielding 141 diagnostic hafted bifaces were identified in the upper Oconee area, including 9 Early Paleoindian (N = 11 points), 14 Paleoindian (N = 24 points), 67 Middle/Late Paleoindian Dalton (N = 106 points), and 3 indeterminate Paleoindian components. Four general types of Paleoindian site were recognized, short-term camps, quarry camps, residential camps, and kill sites, based on site location, size, and assemblage characteristics.

Short-term camps are small sites with a narrow range of formal (intentionally retouched) and expedient (wear retouched) butchering and processing tools made from both local and nonlocal raw materials. Tool kits are highly curated and portable, and bifacially flaked knives manufactured primarily from locally available raw materials are common. In the absence of diagnostic projectile points, Paleoindian short-term camps are inseparable from comparable Early Archaic sites.

The second site category is clearly quarry-related. The lithic assemblages at quarry camps are characterized by quarry debris, exhausted/discarded formal tools (that is, typically bifaces and unifaces of exotic raw materials), and formal and expedient tools most typically made from the local quarry material. In contrast with quarry assemblages associated with later periods, aborted and discarded preforms are rare. There are indications that tools were not only manufactured but also used at these sites, as evidenced by the presence of bifaces that were broken during manufacture, and then modified into different tool forms. The wide variety of tools recovered from these sites indicates that a variety of activities occurred, over and above the procurement of raw material. It is possible, considering the small size of many Piedmont quartz and chert deposits, that some of these quarry sites were exploited only during the Paleoindian period, since the outcrops could have been depleted in only one or a few visits.

Paleoindian residential camps appear to be quite rare in the upper Oconee drainage, and were represented by a cluster of large sites adjacent to Barnett Shoals at the northern end of the survey area. Tool diversity at these sites is high, as is the diversity of raw materials. Tools are manufactured primarily from locally available quartz and chert, but a variety of nonlocal raw materials are also present. Formal unifacial tools are abundant; hafted, unifacial scrapers were the most common tool type in these assemblages, with most made from local Piedmont chert. Projectile points are found in a variety of manufacturing and resharpening stages, and considerable morphological variation is evident. A variety of other tool types are also present, suggesting either long-term or repeated occupation of these areas.

Kill sites, areas where Paleoindian hunters ambushed large animals, have not been conclusively identified in the Georgia Piedmont. Isolated finds of fluted points, however, are fairly common, and may represent individual kill sites or short-duration foraging camps. Large-animal kill site locations within the Georgia Piedmont would be expected near springs and along drainages, but could have been located at any place where such game was available.

Most of the 95 Paleoindian components found in the Oconee study area (N = 83) were apparently short-term camp sites (O'Steen et al. 1989:45). Residential camps (N = 4) were large and well defined, when found, but

were otherwise uncommon. Quarry-related sites were also rare (N = 8), but this may be simply because the use or discard of diagnostic points may have been infrequent at such areas, precluding their easy identification. The sites were grouped by the type of landform they were found on, specifically levee, terrace, uplands edge, and uplands. A gradual expansion of land-use and settlement through time and into new areas was indicated (O'Steen et al. 1989:51). Early Paleoindian sites were located primarily in the floodplain, with the remainder of the sites at the uplands edge. Middle Paleoindian sites still appear frequently in the floodplain, but there is evidence for exploitation of the upland or interfluvial areas. A majority of Late Paleoindian sites, in contrast, were found at the uplands edge or in the uplands. These data suggest that by Late Paleoindian Dalton times populations were using upland areas more frequently. A concentration of Paleoindian sites at shoals is also evident. Although shoals comprise only about 10 percent of the river channel in the survey area, most of the Early Paleoindian sites identified along the upper Oconee were found adjacent to these features.

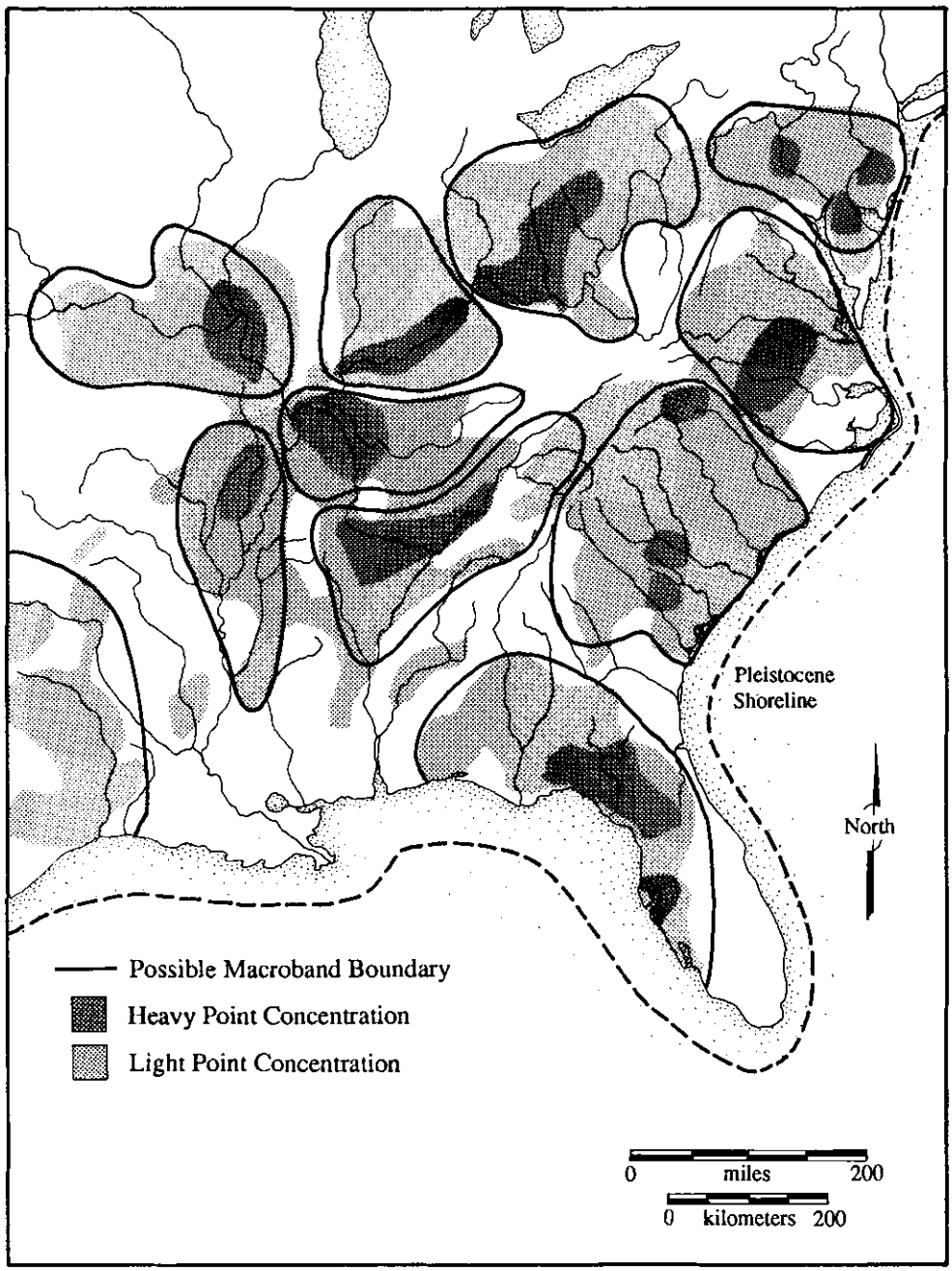
Another major factor affecting Paleoindian site location in the Oconee River survey area is proximity to relatively high-quality lithic deposits, particularly quartz and chert. Early and Middle Paleoindian sites consistently occur near these outcrops, a pattern not observed with the Late Paleoindian sites. The use of local as opposed to extralocal raw material increases dramatically over time in the Oconee sample. Early Paleoindian diagnostics are predominantly of extralocal materials (63.6 percent), while these materials occur with much lower incidence on Middle Paleoindian (29.2 percent) and Late Paleoindian (39.6 percent) diagnostics (O'Steen et al. 1989:53). Interestingly, Valley and Ridge cherts, whose sources lie well to the north and northwest, were observed only in the northern portion of the study area. Groups using this material appear to have had little interaction or direct movement beyond this part of the drainage.

If the upper Oconee sample is typical, Piedmont Paleoindian points tend to be small and extensively resharpened; broken points were often modified and used as scrapers, wedges, and gravers; and broken blades were often fashioned into new, but smaller, bifaces. This strategy of lithic conservation and recycling appears consistently on Paleoindian sites, but is not as prevalent in the following Early Archaic period (O'Steen 1983). The extensive reworking of these Paleoindian assemblages suggests that either locally available lithic raw materials were not as common or as prized by these groups as has been inferred or, alternatively, that the upper Oconee area may have been at the edge of one or more Paleoindian territories centered elsewhere.

Previous studies have identified areas in the Southeast where large numbers of Paleoindian points have been found (summarized in Meltzer 1988 and Anderson 1990a). These areas are hypothesized to have been the location of major Paleoindian population concentrations. Large numbers of fluted points, for example, have been documented in northern Florida, the Atlantic Coastal Plain of South Carolina, and in the Valley and Ridge province of northern Alabama (Figure 6.3). The Georgia Piedmont may thus represent a relatively unoccupied zone between two or more population concentrations whose people, when visiting this area, may have been cautious in their stone tool use. Extensive use of the upper Oconee drainage does not, in fact, appear to occur until the Late Paleoindian subperiod, although the area was certainly not devoid of settlement during the Early and Middle Paleoindian subperiods. There is some evidence to suggest that during the late Pleistocene some big game animals, such as mastodon, may have been more prevalent in the Coastal Plain and Valley and Ridge provinces than in the mosaic boreal forests of the Piedmont (Corgan 1976:17). This might help to explain the observed site distributions, if these animals were indeed targeted.

Coastal Plain Georgia Paleoindian Settlement—The Feronia Locality

Another area characterized by dense Late Pleistocene/Early Holocene assemblages that has received extensive examination in recent years is the Feronia Locality, a concentration of 16 sites located in south-central Georgia near the Big Bend of the Ocmulgee River in Coffee County (Blanton and Snow 1986, 1989). The locality encompasses approximately four square kilometers and is centered on a prominent ridge to the south of and overlooking the broad Ocmulgee floodplain. The area, at the ecotone between the floodplain and the uplands, is characterized by reliable springs, something that may have helped attract early visitors. An extensive Middle and Late Paleoindian and Early Archaic assemblage, encompassing 960 formal flaked stone tools, has been recovered in surface context from the locality, including 2 Suwannees, 18 Daltons, and 83 Bolen and Palmer/Kirk side- and corner-notched points. Three of the Daltons have basal protuberances, a stylistic variant that is fairly common in south Georgia (Snow 1980). The basal nipples do not appear to be platform remnants and may represent an effort to increase the surface contact in the haft. Occurring with these hafted biface types are an array of tool forms that are characteristic of Paleoindian and Early Archaic assemblages over much of eastern North America. Unifacial tools present included endscrapers, discoidal scrapers, thick oblong scrapers, thick unifaces, thin unifaces, gravers, and spokeshaves. Other, less com-



6.3. Paleoindian site concentrations in the southeastern United States.

mon tool forms included adzes, limaces, and Edgefield scrapers.

Two unifacial tool forms dominate the assemblages, endscrapers and thin unifaces. Eight side-notched Edgefield scrapers were recovered, a tool form that occurs in low incidence in Georgia and the Carolinas (Goodyear 1983; Michie 1968, 1972). Pecked and ground stone artifacts of ferruginous sandstone, characterized by a dimple in the smaller end (so-called "egg-stones"), were also recovered. The function of these objects is unknown, although use as bolas or throwing stones has been suggested (Whatley 1986). Gravers and endscrapers appear to have been most common in the pre-Bolen Suwannee and Dalton tool kits. Edgefield scrapers and the pitted "egg-stones" appear to be associated with the Palmer/Bolen assemblages. The placement of the Edgefield scraper with the Early Archaic assemblages was largely on the basis of the side-notched haft shapes these tools share with Bolen points (Purdy 1981:29), although the tool form has been found in Early Archaic context at the G. S. Lewis site on the lower Savannah River (Anderson and Hanson 1988:277).

A noteworthy aspect of the Feronia locality setting is that there is no nearby lithic raw material source, as expected in some models of eastern Paleoindian settlement (for example, Gardner 1977, 1983). The nearest known raw material sources of any significance lie about 80 km to the north and 95 km to the south. What drew people to this locality is currently unknown. The area is very near the interface between the Atlantic and Gulf watersheds, however, a divide that may have had considerable territorial or social significance in the Late Pleistocene/Early Holocene. Almost all (99 percent) of the tools and debitage from the locality are made from Coastal Plain chert, most probably from the Atlantic watershed sources 80 km to the northeast. The remaining traces of material are of silicified coral from the sources 95 km to the south in the Gulf watershed, and traces of metamorphic and igneous materials from the Piedmont approximately 125 km to the north. This array of materials suggests a considerable range of movement and/or exchange was occurring. If the locality functioned as an aggregation locus for early populations, its presence in a non-Fall Line setting is interesting. It suggests that such aggregation sites may occur at any significant environmental interface, whether it be between the Coastal Plain and Piedmont, or the Atlantic and Gulf watersheds. The range of tool forms present suggests, minimally, that sustained occupation or a variety of activities were carried out at Feronia.

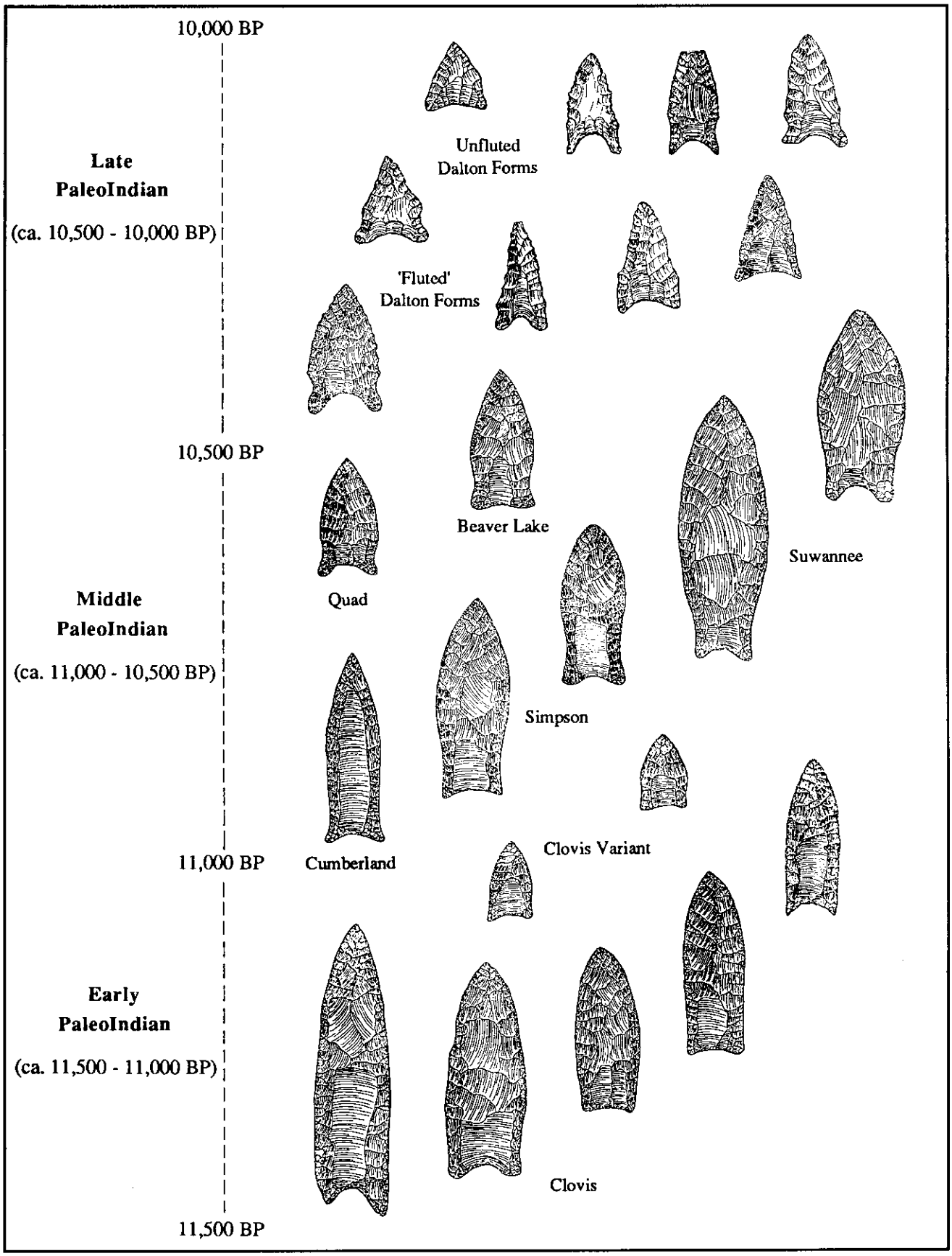
The SGA Paleoindian Artifact Recording Project

Coupled with intensive research at specific sites and localities, Paleoindian research in Georgia has also recently focused on the compilation of projectile point data. In mid-1986, several of the authors of this paper, in coordination with the Society for Georgia Archaeology (SGA), began a fluted point survey, something that, surprisingly, had not been initiated previously (Anderson et al. 1986, 1987, 1990a, 1990b). Prior to this effort, fewer than a dozen fluted points were formally recorded in the state site files. In the massive compilation of fluted points from eastern North America conducted by the Eastern States Archaeological Federation (Brennan 1982), for example, only 10 of 5,820 Paleoindian projectile points were reported from Georgia. Only Rhode Island, of all the states along the eastern seaboard, had fewer Paleoindian points. The low count from Georgia was underscored by the high totals from adjoining states, such as Alabama (N = 1,654), Florida (N = 1,392), North Carolina (N = 329), and South Carolina (N = 95). The low number of diagnostic Paleoindian artifacts reported from Georgia, in fact, represented the most conspicuous gap in the survey. The SGA Paleoindian Artifact Recording Project was initiated to correct this situation.

The reasons for recording information about Paleoindian points are obvious. Fluted and other lanceolate projectile points are currently the only artifacts known to be unambiguous diagnostic indicators of sites of this period. Information about their occurrence is thus the only way, short of excavation and the use of absolute dating procedures, by which archaeologists can recognize these early occupations. Their locations indicate where these people lived, that is, what spots on the landscape were important to them and how they made use of these areas. Study of point styles, and raw materials, furthermore, can provide clues as to how far these people may have traveled over the course of the year and whether or not they were linked or related to groups in other areas (for example, Goodyear 1979; Sassaman et al. 1988). Georgia lies at the junction of the Atlantic and Gulf coastal regions, furthermore, and artifact and site data from the state will undoubtedly prove important to understanding Paleoindian occupations in each area and relationships between these areas. Finally, recording these artifacts provides the basic data essential to test archaeological theories about the nature of Paleoindian occupations, and perhaps in the process dispel some misconceptions (Williams and Stoltman 1965; Anderson 1990b). When the Georgia fluted point survey was initiated, for example, the authors were repeatedly told that there was little evidence for Paleoindian occupation in the state. As the results to date indicate, this does not appear to be the case at all.

Data on both fluted and nonfluted Paleoindian points of all types have been recorded, as well as on other categories of early artifacts. As of January 1992, data on over 250 projectile points have been collected, and attribute and other data on 216 of them were published in a recent monograph (Anderson et al. 1990a). Clovis, Suwannee, Simpson, Cumberland, Quad, and Dalton points have all been identified by the survey, which collects data on complete, broken, and reworked points. Examples of these artifact types are illustrated in Figure 6.4. Paleoindian points have been recorded from over 40 counties so far, mostly from the northern and southwestern parts of the state, where large numbers of collectors have been at work, or major survey projects such as the Allatoona, Wallace, and Russell reservoir projects have occurred. Much of our current evidence from south Georgia reflects the work of one individual, Frankie Snow of Douglas.

Large numbers of Dalton points have been observed in public and private collections around the state, and the survey quickly had to restrict itself primarily to fluted and nonfluted lanceolates (although attribute data on 74 Daltons has been recorded to date). The incidence of Daltons is fairly high, particularly in the central and northern parts of the state, and many of these artifacts are fluted or, more properly, basally thinned, arguing for a direct, possibly local transition from earlier fluted point



6.4. Paleoindian projectile points found in Georgia during the SGA survey.

assemblages. With the addition of Georgia to the fold, Paleoindian projectile point recording projects are now underway in almost every state and province in eastern North America, and as of late 1991 almost 11,000 of these artifacts have been recorded (Anderson 1991b).

Early Archaic Assemblages from the Georgia Area

The Early Archaic period in eastern North America is widely viewed as a time of initial human adaptation to Holocene, postglacial climatic conditions. Accepting the placement of the Pleistocene/Holocene boundary at 10,000 B.P., a roughly 2,000-year span for the Early Archaic period is employed in most cultural sequences. The end of the Early Archaic is usually equated with the onset of the Atlantic, or Hypsithermal episode, at about 8000 B.P. In its most common expression, the Paleoindian to Early Archaic transition is viewed as one in which the assumed predominantly big-game hunting, focal Paleoindian adaptation was replaced by a more generalized or diffuse "Archaic" hunting and gathering way of life.

In the lower Southeast, Early Archaic components are recognized almost exclusively by the presence of diagnostic side- and corner-notched and/or bifurcate-based projectile points. These hafted biface forms, from earliest to latest, include the Dalton and Hardaway-Dalton types dating ca. 10,500–9900 B.P.; the Taylor-Big Sandy-Bolen side-notched types dating ca. 10,200–9500 B.P.; the Palmer-Kirk corner-notched types dating ca. 9500–8900 B.P.; and a series of bifurcate forms, including the MacCorkle, St. Albans, LeCroy, and Kanawah types dating from ca. 8900–8100 B.P. The end of the Early Archaic in the region is characterized by the replacement of these notched and bifurcate forms by square and contracting stemmed Stanly and Morrow Mountain point forms (Anderson 1991a; Broyles 1971; Chapman 1975, 1976:2–7, 1985; Coe 1964; Daniel and Wisenbaker 1987; Dunbar et al. 1988; Goodyear 1982; Goodyear et al. 1979: 100–106; Oliver 1985).

The occurrence, relative temporal placement, and diagnostic utility of these hafted biface forms in the lower Southeast were initially delimited by Coe (1964) at the Hardaway and Doerschuk sites in Piedmont North Carolina. Subsequent excavations have provided extensive confirmation and some refinement of this sequence, which has been found to have general utility throughout Georgia and the Carolinas. Sequence refinement and component identification have tended to dominate ongoing research, although some studies have appeared that attempt to move beyond this, toward the reconstruction of prehistoric activities at individual sites and the development of formal settlement models (Smith 1986; Steponaitis 1986).

Excavation Assemblages

Until quite recently, little was known about the Early Archaic period in Georgia (DePratter 1976a). A number of Early Archaic sites have seen small-scale, spatially limited excavation in the Georgia area in recent years. Materials have been recovered from probable quarry workshop sites such as Theriault and Muckafoonee Creek in Georgia (Brockington 1971; Elliott 1982); from terrace locations in the inner Coastal Plain such as at Cal Smoak and Pen Point in South Carolina and Taylor Hill in Georgia (Anderson et al. 1979; Elliott and Doyon 1981; Sassaman et al. 1990); from Piedmont terraces such as at Gregg Shoals in Georgia (Tippitt and Marquardt 1984); and from several locations in the Wallace Reservoir in central Georgia (O'Steen 1983; O'Steen et al. 1989). In addition, extensive excavations have been conducted at several Early Archaic sites in the Little Tennessee River area of Tennessee (Chapman 1985), and at the Rucker's Bottom (Anderson and Schuldenrein 1985) and G. S. Lewis sites (Anderson and Hanson 1988; Sassaman et al. 1990:91–96), in the Georgia Piedmont and South Carolina Coastal Plain portions of the Savannah River drainage, respectively. The G. S. Lewis and Rucker's Bottom excavations, in fact, are among the largest from this time level in the lower Southeast.

Models of Early Archaic Settlement in the Lower Southeast

Many of the views that dominated professional archaeological assessment of Early Archaic settlement systems during the 1950s and 1960s and in some instances to the present day were outlined by Griffin (1952a:354–55) in a paper entitled "Culture Periods in Eastern United States Archeology." A picture of small, exogamous, probably patrilineal and patrilocal egalitarian bands moving within specific hunting territories was advanced. Seasonal population movement linked to resource procurement, as well as periodic aggregation for ceremonial purposes and information sharing, were suggested facets of Early Archaic life. While some of these views were readily adopted, notably those about small group size coupled with extensive geographic mobility, Griffin's views on the importance of ceremonial and information sharing networks at this early time level were largely ignored until quite recently.

The 1950s paper that had perhaps the most profound impact on subsequent views on Early Archaic lifeways and settlement, however, was *Trend and Tradition in the Prehistory of the Eastern United States* (Caldwell 1958). Caldwell argued that although the eastern Woodlands were rich in exploitable foodstuffs, aboriginal knowledge about the occurrence and effective utilization of these resources

only slowly developed. Life prior to the establishment of what he called "primary forest efficiency" was portrayed as "unsettled, nomadic . . . almost completely wandering" (Caldwell 1958:8–11). Because the specialized nut-processing economies observed later were not in evidence, hunting was thought to be of considerable if not primary importance. This picture of Early Archaic life, as a highly mobile, predominantly hunting adaptation has continued to dominate thinking about the period.

The basic premise of Caldwell's "primary forest efficiency" argument, that it took thousands of years for local aboriginal populations to learn how to effectively exploit the eastern forest, has been severely challenged in recent years. It is no longer assumed, for example, that plant foods were a relatively minor, unimportant part of the early Holocene diet (Asch et al. 1972; Asch and Asch 1985; Meltzer and Smith 1986; Smith 1986). While probable plant processing tools have been only rarely noted or emphasized in Early Archaic excavation reports (as reviewed in Goodyear et al. 1979:104–5), recent compilations suggest that they may be more common than once thought (for example, Anderson and Schuldenrein 1983; Smith 1986). Where favorable preservation conditions occur, and where careful recovery procedures have been used, evidence for plant exploitation is common at sites dating to this time level, as Chapman's work in the Little Tennessee River Valley has demonstrated (Chapman 1977; Chapman and Shea 1981:63, 77; see also Asch and Asch 1985 and Cowan 1985 for similar examples from the midcontinent).

During the 1970s and 1980s, a number of models appeared that attempted to examine and partially explain Early Archaic settlement and land use in portions of eastern North America. Perhaps the most significant attempts in the general Georgia area have been: (1) Claggett and Cable's (1982) "Effective Temperature/Technological Organization" model; (2) O'Steen's (1983) "Wallace Reservoir" model; and (3) Anderson and Hanson's (1988) "Band/Macroband" biocultural model, each of which is discussed in turn.

THE HAW RIVER EFFECTIVE TEMPERATURE/ TECHNOLOGICAL ORGANIZATION MODEL

In the context of a major excavation and reporting program centered on two deeply stratified sites along the Haw River in the central Piedmont of North Carolina, Claggett and Cable (1982; Cable 1982) argued that changes in the technological organization of local Paleoindian through later Archaic adaptations were a direct, if delayed, response to postglacial warming. They note that the Late Pleistocene and early Holocene was a time of dramatically increasing average annual temperature in the Southeast, a situation that would have had a considerable effect on local resource structure and hence on hunter-gatherer organizational strategies.

In brief, with the onset of warmer, post-Pleistocene conditions, and increasing environmental homogeneity, a pattern of high residential mobility, or frequent settlement relocation upon the exhaustion of local resources, is thought to have developed. Archaeologically, this resulted in a corresponding shift in assemblages from highly curated tool forms characteristic of logistically provisioned collector adaptations to highly expedient, situational technologies better suited to foraging adaptations (Binford 1980). At the Haw River sites, where the study of directionality within local technological adaptations formed a primary research goal, a pronounced shift from curated to expedient tool forms was noted between the Dalton and Palmer assemblages (Claggett and Cable 1982:686–87, 764). The data from the Haw River sites thus suggest that by shortly after 10,000 B.P., at least in this part of the Southeast, a predominantly residentially mobile, foraging adaptation had become established. The increase in residential mobility and decrease in residential permanence suggested by this model thus runs counter to the traditional view advanced by Caldwell that increasing sedentism characterized the Archaic in the region (Claggett and Cable 1982:13).

A further test of the Haw River model examined assemblage data from 98 Early Archaic sites in Georgia and the Carolinas (Anderson and Schuldenrein 1983:201). Most of the Early Archaic assemblages were found to be characterized by highly expedient technologies, with only a low incidence of formal, curated tools. The variation in assemblage size and composition that was observed, it was suggested, was more likely the result of re-occupation than of major differences in site function. A high level of group mobility was further indicated, particularly along rather than across drainages, through an examination of the incidence of local versus extralocal raw materials on diagnostic projectile points (Anderson and Schuldenrein 1983:201, 205).

THE WALLACE RESERVOIR EARLY ARCHAIC MODEL

One of the more ambitious attempts to examine Early Archaic settlement in the lower Southeast in recent years was by O'Steen (1983), based on an analysis of 363 Early Archaic projectile points from 248 sites located in the floodpool of the Wallace Reservoir, on the upper Oconee River in the eastern Georgia Piedmont. O'Steen (1983: 68–69, 99) was able to demonstrate that Early Archaic site density along the upper Oconee was highest in areas of greatest resource density and diversity (major Early Archaic camps were defined as clusters of sites where more than one Early Archaic point or component were found; O'Steen 1983:106). The majority of multicompo-

nent/multipoint sites occurred at the confluence of two or more drainages, on high terraces, and at shoals. These floodplain sites were interpreted as major spring, summer, or fall camps, while the major upland sites were interpreted as fall/winter camps (O'Steen 1983:106–8). Single point loci, the most widely scattered class of sites, occurred on all land surfaces and along both major and minor drainages. These sites, which outnumbered multicomponent/multipoint sites by a 5:1 ratio, were interpreted as transitory hunting/butchering or other specialized activity camps (O'Steen 1983:108–9).

Using population density estimates for hunter-gatherers of from 0.05 to 0.13 persons/square kilometer (taken from Jochim 1976:134), O'Steen (1983:110) argued that the area of the Wallace Reservoir could have supported between 80 and 200 people at any one time during the Early Archaic. Following this line of reasoning, she argued that a maximum band (defined by Wobst 1974:152 as "a marriage network which guarantees the biological survival of its members") of approximately 475 people could have subsisted within the overall Oconee basin, which extended over about 13,600 square kilometers (O'Steen 1983:112). In contrast to the studies conducted by Claggett and Cable (1982) and Anderson and Schuldenrein (1983) noted previously, O'Steen argued that local Early Archaic populations were comparatively sedentary, operated within smaller territories, and may have obtained their extralocal lithic raw materials through exchange with other bands (1983:115–16). The evidence marshaled in support of this position, that this type of adaptational system tended to occur among "hunter-gatherers in temperate, ecologically diverse environments" (O'Steen 1983:115), remains, however, to be demonstrated (for example, Binford 1980, 1983; R. L. Kelly 1983). Only limited data, furthermore, is available on early Holocene paleoenvironmental conditions and resource structure in the Georgia area. Overall, however, the attempt to incorporate an array of factors, including paleoenvironmental conditions, microenvironmental variability in site location, and the need to maintain viable mating networks represented an important advance.

THE BAND/MACROBAND BIOCULTURAL MODEL

The third generalized model of Early Archaic settlement to emerge in the lower Southeast in recent years is Anderson and Hanson's (1988) "band/macroband" model, which was evaluated with archaeological data from the Savannah River Basin. Four limiting factors, it was argued, strongly conditioned the structure and operation of Early Archaic adaptations in this region. These were (1) environmental structure, specifically as it relates to seasonal and geographic variation in food, lithic raw materials, and other resources; (2) biological interaction, manifest in mating network regulation; (3) information exchange, notably for mating network maintenance and subsistence resource regulation; and (4) demographic structure, evidenced in population size and spacing.

Two levels of settlement organization were proposed, corresponding to local (band-level) and regional (macroband) organizational systems. At the band level, coresidential population aggregates of from roughly 50 to 150 people occupying individual drainages were proposed, and a hypothesized pattern of annual band mobility within the Savannah River basin was advanced. Regional social entities, macrobands corresponding to Wobst's (1974) minimum equilibrium mating networks and assumed to consist of from roughly 500 to 1,500 people, were also proposed, extending over several contiguous river valleys. A spatial model for the distribution of individual bands over the South Atlantic Slope, and macrobands over this part of the Southeast, was advanced.

In brief, the hypothesized annual pattern of band-level mobility in the Savannah River basin saw the use of base camps during the winter and short-term foraging camps throughout the remainder of the year. Annual movement was toward the coast during the early spring, back into the Upper Coastal Plain and Piedmont during the later spring, summer, and early fall, with a return to the winter base camp in late fall. The return to the winter base camp may have incorporated side trips to other drainages, for aggregation events by groups from two or more different drainages. Fall Line river terraces are posited aggregation loci, since the dramatic character of this macroecotone, where rocks and shoals first appear proceeding inland from the coast, would facilitate population rendezvous. The occurrence of rich Early Archaic assemblages, characterized by atypical concentrations of formal tools in Fall Line sites across the region, supports an interpretation that these areas saw use in special activities of some kind (Anderson 1979; Michie 1971; Wetmore 1986; Wetmore and Goodyear 1986). Recent testing of this model, by Daniel (1991), working with materials from the Hardaway site, has highlighted the extent to which variability in the occurrence of major lithic raw material sources can influence settlement, particularly the location of residential base camps.

The hypothesized regional distribution of Early Archaic band-level groups reflects, to some extent, regional physiographic conditions, particularly the northwest to southeastward trending flow of most major drainages, from the Appalachian Mountains to the ocean. The maintenance of viable Early Archaic populations, given the inferred population levels within individual drainages, would have required mating networks extending over a large area (Wilmsen and Roberts 1978; Wobst 1974; Wright 1981). Low population densities of between 50 to 150 people per drainage are proposed during the initial

Early Archaic occupation of the region; this figure in all probability increased over time, leading to group fission and a concomitant decrease in annual range. To maintain a minimal equilibrium population, at least during the initial Early Archaic, several bands, probably from at least three to five major drainages, would have had to be in regular contact. The fluid movement of individuals, coupled with periodic aggregation of larger social groups at Fall Line locations, are suggested mechanisms by which this interaction was maintained (see also Conkey 1980; Hayden 1982). The need to find and exchange mates in a cultural environment characterized by an extremely low population density thus is thought to have played a major role in shaping Early Archaic, and presumably earlier Paleoindian, settlement systems in the region. As the landscape filled up, over the course of the Paleoindian and subsequent Archaic periods, the strength of this driving force would lessen. Social fluidity may be an entirely appropriate mechanism of intergroup contact during the Middle Archaic, and has been inferred in some local models (Sassaman 1985; Blanton and Sassaman 1989).

Conclusions

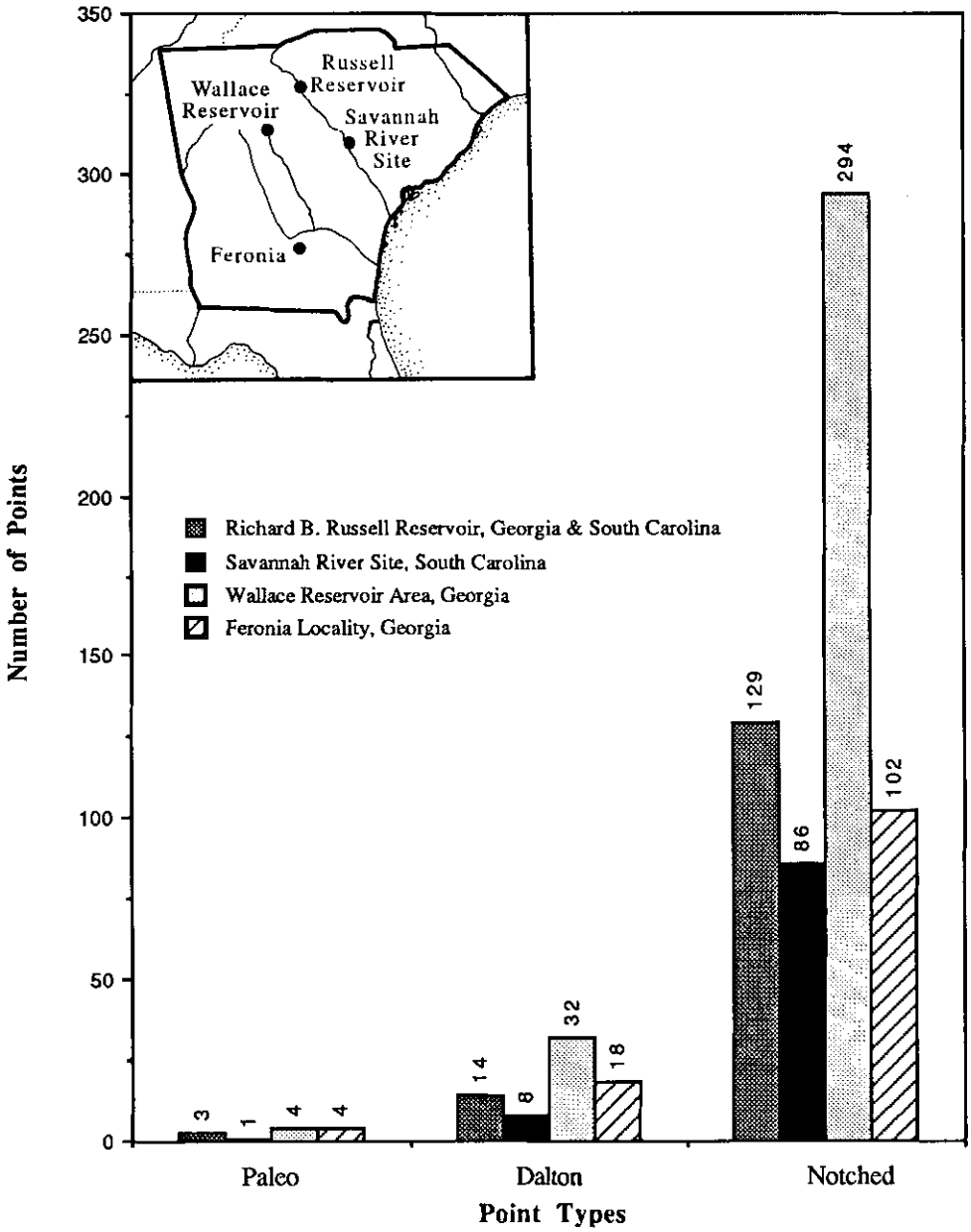
Analyses conducted to date at Paleoindian and Early Archaic sites indicate that considerable assemblage variability existed during these periods in the Georgia area. While a general trend toward expedient technologies and foraging adaptive strategies is indicated, the presence of seasonal base camps is also indicated, particularly during winter months. Different types of short-duration camps, representing residential locations, aggregation sites, or areas used by specialized task groups, have also been identified. Unfortunately, specific details about matters such as season and duration of site use, or the size of the resident groups, must await larger excavations, the recovery of preserved floral and faunal remains (or other seasonal indicators), and continued development of analytical strategies used to examine existing data.

Geographically wide-ranging adaptations during both the Paleoindian and Early Archaic periods are indicated by analyses of hafted bifaces from collections along local drainages and across the region (Anderson and Schuldenrein 1983:201; Anderson and Hanson 1988:280–81; Goodyear et al. 1989; Sassaman et al. 1988:85–87). Lithic raw materials used to manufacture hafted bifaces, artifacts readily identified to period, occur at distances of up to 300 kilometers from their source area at some sites. A gradual rather than a dramatic or steplike fall-off in the occurrence of lithic raw materials occurs, suggesting minimal social boundaries. Furthermore, extralocal raw material use appears greatest along rather than across drainages, based on analyses of diagnostic artifacts from riverine and interfluvial contexts, suggesting that most group activities (except for possible seasonal or annual aggregation events) occurred within individual drainages. Finally, evidence for raw material or finished artifact exchange is completely lacking. The assemblages recovered to date, even at quarry sites, suggest routine tool-kit maintenance, discard and replenishment, or "gearing-up" activity rather than production for exchange.

The high incidence of extralocal raw materials on Early Archaic artifacts that are found on sites over the region might be expected if low numbers of people were moving rapidly over the landscape. The almost exclusive use of local raw materials characteristic of succeeding Middle Archaic populations in the general region (Anderson and Schuldenrein 1985:317; Blanton 1983; Blanton and Sassaman 1989; Sassaman 1983) may reflect increasing regional population densities and a corresponding decrease in annual range (for example, see also Brose 1979; Ford 1974; Smith 1986:18–25; Stoltman 1978). If these raw material distributions are indeed an accurate indicator of regional settlement dynamics, a time-transgressive decrease in the use of extralocal raw materials should be evident over the course of the Early Archaic, as population increased and mobility decreased, something indicated in the archaeological record from the region (Anderson 1991a).

Evidence for a major increase in population, or at least in the use of projectile points, over the interval from the Paleoindian through the Early Archaic periods is indicated by an examination of diagnostic projectile points at four differing localities in the Georgia area. These localities include the upper Oconee River/Wallace Reservoir (O'Steen 1983; O'Steen et al. 1989), the Russell Reservoir (Anderson and Joseph 1988:25), (3) the Savannah River Site (Sassaman et al. 1990), and (4) the Feronia locality (Blanton and Snow 1986, 1989) (Figure 6.5). While this increase is progressive, major increases in the numbers of observed diagnostics are evident between the Middle and Late Paleoindian periods, and again from the Late Paleoindian to the Early Archaic. To some extent, these increases may reflect changing hunting strategies and tool technologies as much as population growth. Dalton and later Early Archaic hafted bifaces, for example, appear to have seen extensive use as multipurpose tools, more so than earlier fluted and unfluted lanceolate forms in the region. If these data do accurately monitor regional population levels, however, it suggests that major population growth was occurring, and that considerable landscape filling had occurred by the start of the Early Archaic period.

As can be seen from this review, a tremendous amount of information about the early inhabitants of the lower Southeast has been collected since the Macon Plateau fluted point was discovered some 50 years ago. Thousands of early sites, and literally tens of thousands of artifacts,



6.5. Evidence for Paleoindian through Early Archaic period population increase in the Georgia area, measured using incidence of diagnostic projectile points.

are now known from across the region, offering considerable potential for synthesis. Effective organization of this data, transcending state boundaries, is the next step. The establishment of regionwide databases, compiling site, paleoenvironmental, and artifactual data, needs to be initiated and used to develop new perspectives on the initial settlement of the region.

Acknowledgments

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