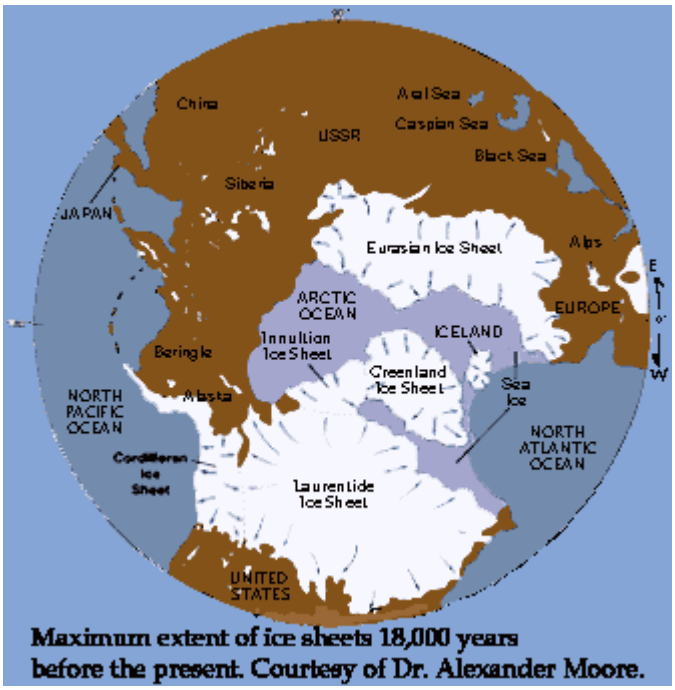
Florida Historical Contexts: The Paleoindia Period

The Paleoindian Historical Context was written by Nina Borremans as part of a proje directed by Gerald T. Milanich in 1990. Illustrations were added later and some text sections have been updated by staff of DHR.

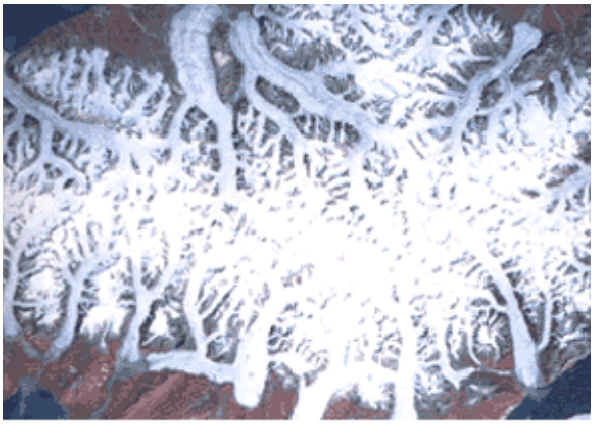
Introduction



Maximum extent of ice sheets 18,000 years before the present. Courtesy of Dr. Alexander Moore.

Archaeological evidence indicates that, addition to hunting small game and gathering wild plants and shellfish, Paleoindians stalked now-extinct Pleisto megafauna; however, the role these la animals played in the day-to-day busin making a living varied considerably acr the continent. Large, stemless, stone s points, the most diagnostic of the artifa made by Paleoindians, are time-marke used by archaeologists to identify Paleoindian sites. Due to the ravages o time, erosion, and decomposition of perishable artifacts, projectile points ar other stone artifacts are often all that r to represent these early prehistoric pec and their hunting-gathering way of life.

The environmental repercussions of climatic change and glacial melting provided a dynamic background for cultural response during the Paleoindian period, which lasted about five thousand years. The end of the Paleoindian way of life is difficult to identify archaeologically and may have been one of gradual transition.

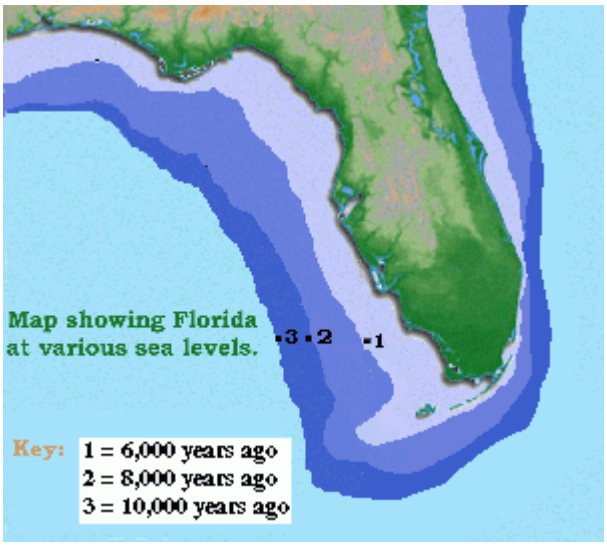


Space shuttle view of a modern continental ice

About 10,000 years ago, changes in the Florida landscape and environment coincide new developments in subsistence technology and settlement patterns, leading to the archaeologically defined stage, the Archaic.

Less than 100 Paleoindian sites are recorded in Florida. These known sites are scatte around the state and their recording is primarily a result of accidental discoveries. M more Paleoindian sites undoubtedly exist, but they are located offshore on the conti shelf, in terrestrial wet areas, or are deeply buried. These inaccessible locations mak difficult to identify Paleoindian sites, and our ignorance of them has biased our interpretation of Paleoindian culture.

The Setting



The Paleoindians lived in a Florida twice the it is today. At the time they lived, sea level 60-100 m lower, exposing vast expanses of present continental shelf (Gagliano 1977; Blacky et al. 1979). Present-day coasts were inland, upland, areas. The late Pleistocene shorelin the Gulf of Mexico were located as much as to 150 km seaward of their present location is not difficult to see why Paleoindian perioc coastal sites have yet to be discovered in Fl they are submerged beneath scores of fath ocean water, tens of kilometers offshore (St 1986; Garrison 1989).

Pollen and paleontological studies have provided us with evidence of the climate and environment at this time. They indicate that Florida was considerably drier than it is

Vegetation of north Florida highlands at about 14,000 B.P. generally was open pine f giving way to oak/hickory stands and local prairies. The central and southern penins had open xeric scrub vegetation. Climatic condition of the coasts is still a subject for debate among paleoecologists. The most common view is that the coastal strips rem arid throughout the Paleoindian period, supporting savannahs and dune scrub excep where springs and rivers brought life to the dry conditions.

Paleoecological reconstructions focusing on macrobotanical and paleontological samples give us a picture painted with a finer brush. They suggest that the environmental mosaic was more diverse than the pollen studies can indicate. Mesic vegetation punctuated the forests and savannahs. Seepage and runoff from springs and rivers provided water for moisture-loving trees and shrubs, which were limited elsewhere by lack of groundwater.


replica of a giant armadil

These hammocks supported a suite of animal and plant life that exceeded what wou have been available in the dry forests alone. By 10,000 B.P., the forests became der while oaks and pines filled in previously unforested areas. Oak savannahs replaced r of the scrub vegetation of the lower peninsula.

Material Culture

Of all of the materials used by the Paleoindians for clothing shelter, tools, weapons, ornaments, containers, etc., only has stood the test of time. Artifacts made of organic mater such as skin, shell, bone, wood, and plant fiber have long perished in the acid Florida soil, with the exception of thos have been preserved in submerged deposits. As a result, c knowledge of the Paleoindian artifact assemblage is largely limited to lithic tools and the by-products of their manufac and use. The Paleoindians had a marked preference for hig quality chert (silica-replaced limestone) and fine workman

Paleoindian research has, until recently, focused on the definition and description of projectile points. As more sites are found with intact stratification, however, investig

will be able to give more attention to the lithic complex as a whole. By studying chip stone remains, archaeologists learn how chert was quarried from limestone outcrops the raw material was modified to produce tools, and to what uses these artifacts we Of equal interest is how each of these activities and processes may have varied from to site and regionally in Florida, and how they changed through time.

Large, lanceolate projectile points have been recognized by archaeologists as the hallmark of the Paleoindian period. Some of these points may have been used as hafted knives. The Suwannee point is the most commonly reported lanceolate in Florida, but several other types and varieties have been defined to incorporate the stylistic and temporal variations in form. Common traits include lateral rather than basal thinning, basal grinding, and straight to slightly waisted lower sides. Based on technological and stratigraphic investigations, some temporal trends in projectile point shape have been documented. Point length and thickness appear to decrease in time, while waisting increases.

Analyses of Paleoindian artifact assemblages show that most tools were generalized nature. They appear to be multi-functional and do not represent the specialized form might expect if only certain kinds of animals were hunted and processed to the exclu of others (Daniel and Wisenbaker 1987).

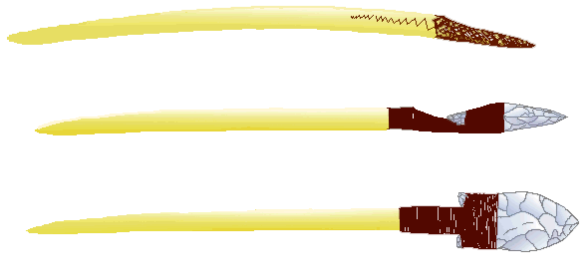
A number of unifacial lithic tools have come to be considered formal Paleoindian arti types because they display regular morphological features, reflect substantial effort manufacture, and can be recognized in assemblages from other Paleoindian sites in and the rest of the Eastern United States. Typically, these tools are plano-convex, ex steeply flaked working edges, and appear to have been used primarily for scraping.

Paleoindian unifacial scrapers vary widely in shape and size, presumably reflecting the wide variety of tasks for which they were employed. By analyzing length measurements and length:width/length:height ratios, a rough typology has been developed. The Paleoindian artifact assemblage from the Harney Flats site (8HI507), probably the most complete assemblage known from Florida, has been described in detail by Daniel and Wisenbaker (1987). Among the categories of unifacial tools they discuss are endscrapers (including thumbnail scrapers) and discoidal scrapers (Daniel and Wisenbaker 1987:65-74).

Also found in the Paleoindian tool complex is an array of tools that do not exhibit diagnostic traits. The majority show only slight modification and use wear. These art

are often interpreted as informal and expedient tools. Blade knives, flake knives, gra and bifacial knives are recovered. Small retouched flakes, flake debitage, cores, and hammerstones are also frequently found at intact Paleoindian sites.

Few of the artifacts found at Paleoindian sites are made of material other than chert Sandstone hones or abraders are probably part of the tool kit. Egg-shaped objects m of ground stone may have been used as bola weights in the hunting of water birds a other game (Milanich and Fairbanks 1980:39).



reconstructed drawing of foreshafts by J. Dunbar.

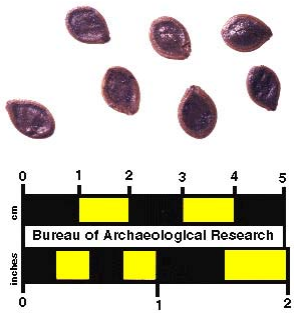
Bone and ivory foreshafts and bone pins recovered from springs, lakes, and rivers constitute the majority of artifacts made of organic materials. The two-piece foreshafts used in hafting projectile points to wooden shafts. Double-pointed bone implements ar commonly found in rivers near kill sites. Hypotheses concerning their use range fro leisters or harpoon tips to awls to fish hook

These interpretations suggest that fishing may have been of greater economic impo than current subsistence models allow. Rarer than the bone points and foreshafts other bone tools, socketed antler projectile points, worked shell, and worked fossil s teeth.

Plant materials must have played an important role in Paleoindian technology becau they do in every other sub-Arctic culture. Underwater excavations at Little Salt Sprir (8SO18) resulted in the recovery of several wooden artifacts, including a stake used impale a now-extinct species of giant land tortoise, a carved oak log mortar (for grir seeds or nuts), and a nonreturning boomerang made of oak (Clausen et al. 1979). R excavations at the submerged Page-Ladson site (8JE591) on the Aucilla River have resulted in the recovery of preserved plant remains that are a valuable source of paleoecological information (Dunbar et al. 1988). Continued searching for Paleoindia sites may someday lead to the discovery of a complete archaeological assemblage representing the breadth of techniques and materials employed.

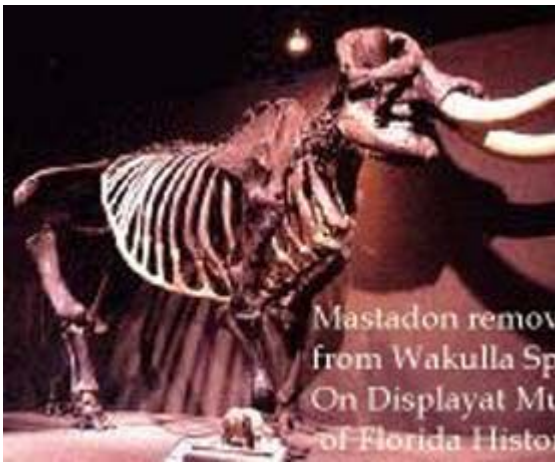
Subsistence

The Paleoindians have conventionally been characterized as hu and gathering nomads, moving seasonally as the availability of game and wild plant foods changed, settling only for brief perio when resources such as nuts or fruits were temporarily plentifu Although most reconstructions of Paleoindian subsistence have emphasized the role of large now-extinct Pleistocene animals li mastodons, many researchers now suggest that the Paleoindia



was more generalized and included smaller game, fish, shellfis plant foods. We now know from studies by Daniel and Wisenba (1987) and others that Paleoindians were not as nomadic as previously believed.

Our perceptions about the Paleoindian lifestyle in Florida have been colored by the emphasis on the Paleoindian Big Game Hunting Tradition described for the Western United States. We now think that their diet included much more than elephants and bison on a day-to-day basis, although faunal and botanical remains are rarely recovered in direct association with Paleoindian artifacts in residential sites (spring and sinkhole sites constitute an important exception).



Models of Paleoindian lifeways in Florida should consider physiography, climate, vegetation, and animal populations in assessing the potentials for food and raw mat resources.

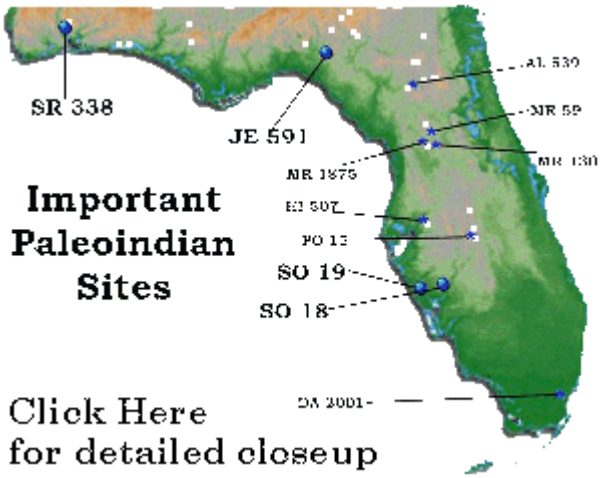
In addition, these assessments should be undertaken on regional and local scales. In Florida, late Pleistocene savannahs supported grazing herds somewhat analogous to found on the Plains, but many other animals (large and small) lived in the hammock surrounding the rivers, lakes, and sinkholes that were important locations for Paleoi activities (Webb and Martin 1974).

Evidence of extensive interaction with other groups can be seen in the uniformities observed in artifact types across the continent. Projectile points of this period show minor regional variations in form. Occasional pieces of exotic materials are found at Paleoindian sites in Florida, suggesting interregional travel and trade. However, mos utilitarian artifacts found in areas where chert is accessible were made of materials f nearby, suggesting that the lifestyle of these early Floridians may not have been qui nomadic as we have supposed (see Goodyear et al. 1983).

Major factors in questions of sedentism in Paleoindian settlements are the reliability richness of the resource base. Although human population density is thought to have very low, putting minimal strain on prey populations, the seasonal vagaries of terres resource availability would have been a major factor affecting sedentism. Aquatic

ecosystems, on the other hand, have been shown to provide a relatively stable, nutr rich food base when compared with terrestrial habitats. The role of aquatic resource rarely included in discussions of the Paleoindian lifeway despite the fact that sites of age are most frequently found in or near water. Freshwater fish, turtles, alligators, a shellfish may have been as important to the Paleoindians as they were for their successors, but a lack of preserved faunal remains prevents an evaluation of this the The hypothesis that Paleoindians developed or brought with them a tradition of mari adaptation is also difficult to document (or refute) at this time. Both the Atlantic and Gulf coasts of Florida would have provided fish and, perhaps, shellfish, and it is unlik that such potentially important resources were ignored. As our means of underwater detection and testing improve, we may well find 10,000 year old shell middens 120 offshore.

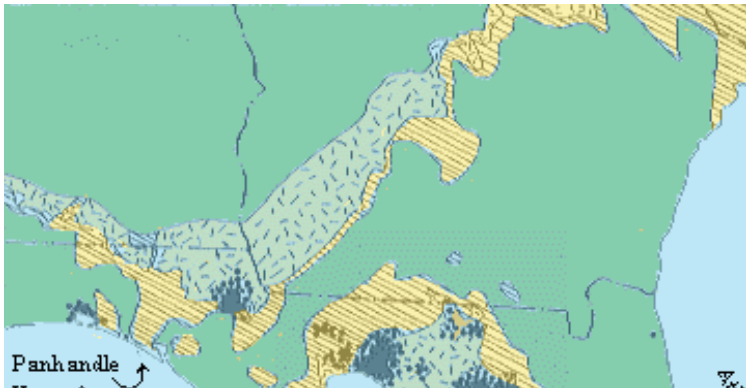
Settlement Patterns



The predictive site location model developed Dunbar and Waller (1983) focuses on the cl correlation between known Paleoindian sites the distribution of chert-bearing limestone outcrops. While the availability of chert for t production was certainly a factor in site loca the site clusters identified are also correlate with surface water availability. With a dry cl and sea level 60-100 m below its present st inland water tables were also low, (recogniz that there may not be a direct correlation between coastal sea level elevations and int local groundwater levels) resulting in a scar available water.

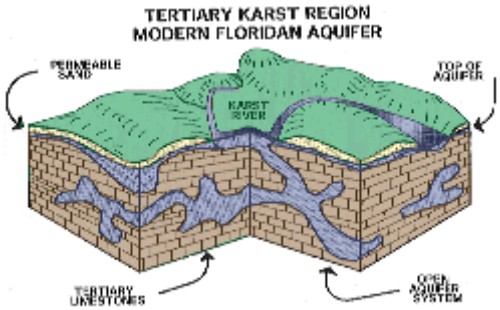
Most of the sites within the mapped distribution are located in or near sources of permanent fresh surface water, which must have been a valuable resource for peopl game animals alike.

Chert is most accessible in many of the same locations where sites have been found but also where ancient sites have the best chance of being discovered. These include: 1) where erosion



has removed an overlying mantle of clastic materials, such as along inland waterways, 2) where the rate of sediment accumulation is low, such as on the tops and slopes of hills, 3) where karst features puncture the sedimentary overburden, such as sinkholes, and 4) on the central Gulf coast, where erosion due to sea level rise has bared limestone bedrock. Paleoindian sites have a higher probability of being found in these situations than in other areas where thick deposits of sands have accumulated.

As demonstrated at Harney Flats, testing in areas where Paleoindian artifacts have b found can locate sites even if they are buried under thick sand deposits. To date suc testing has been limited in Florida.



Click here for Karst topography

Modern alterations of the Florida landscape to incr the amount of dry land available for buildings, far and roads have resulted in increased access to ea prehistoric sites. Many sites would not be discover using accepted survey techniques due to their loc in former swamps. This points out the high probab that most Paleoindian sites will be missed by conventional surveys since most sampling strategi target only land that is well to moderately drained

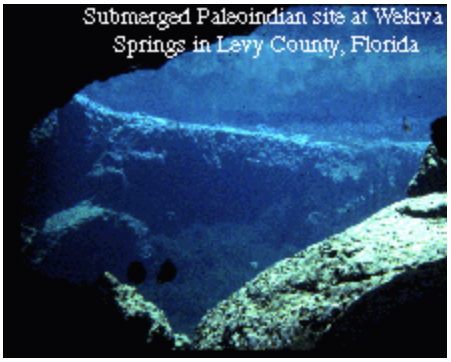
If most early prehistoric sites are deeply buried, surveys are unlikely to identify Paleoindian sites because shovel tests are generally too few, too small, and too shal intersect them. Unless exposed by bulldozing, road cuts, or natural erosion, most bu Paleoindian sites will be found because they happen to underlie younger, more acce sites. Clearly, we must revise our testing strategies.

The lanceolate projectile points characteristic of this time period are uncommon alon coasts of Florida with the exception of the north central Gulf coast where Tertiary ka terrain brings both chert and water to the surface (Dunbar and Waller 1983). Quite proba

many terrestrial Paleoindian sites remain undiscovered along the coasts because the occur below the current water table and have been covered by soils in these lowlying areas.

Some archaeologists are giving increasing attention to the high probability of locatin drowned Paleoindian and Archaic sites on continental shelves worldwide. Geologic st of drowned riverine, lagoon, and marsh deposits indicate that estuarine resources m have been continuously available from Paleoindian through Archaic times. Recent eff devoted to the discovery of coastal sites have met with some success using a site lo model focussing on drowned rivers and submerged limestone outcrops. Talking with fishermen and sport divers has resulted in the identification of submerged shell midc sites (not Paleoindian) in the Tampa Bay area and in the drowned channel of the Au River (Ruppé 1980; Dunbar 1989). Diagnostic projectile points dredged from Tampa Bay a the Atlantic coast provide evidence that submerged Paleoindian sites exist, although search for maritime sites must look farther offshore (Goodyear et al. 1983).

Remote sensing techniques employed in the Gulf of Mexico have identified Pleistocene sinkholes on the outer continental shelf, attesting to the potential for locating deeply submerged Paleoindian sites in the future in this manner (Garrison 1989). Archaeologists may eventually identify potential site locations with side scanning sonar, sub-bottom profiling, and a host of other sophisticated techniques, then sample them using submersibles.


Submerged Paleoindian site at Wekiva Springs in Levy County, Florida

Base Camps and Villages

These and the other types of sites discussed below should be treated as hypotheses further researched. These sites are generally found near both fresh water and chert outcrops. They are most often multicomponent sites (e.g., the Harney Flats site) be later people continued to return to the area for the same reasons Paleoindians inhab them. Residential sites are important sources of information on site size (population and site structure (social organization) when components can be isolated stratigraphically. There is also an increased likelihood of finding formal tools and no utilitarian artifacts for information on trade, inter-group contact, and group mobility sedentism. Technological analyses are enhanced when all categories of artifacts are present in the assemblage. The artifacts recovered from large camps and villages generally include tools in various stages of manufacture, and debitage from primary nodules (with cortex) and secondary modification (shaping and sharpening). Import base camp sites include the Harney Flats site (8HI507) in central Florida and the Bu site (8SU2/8GI1) at the mouth of the Santa Fe river in north Florida.

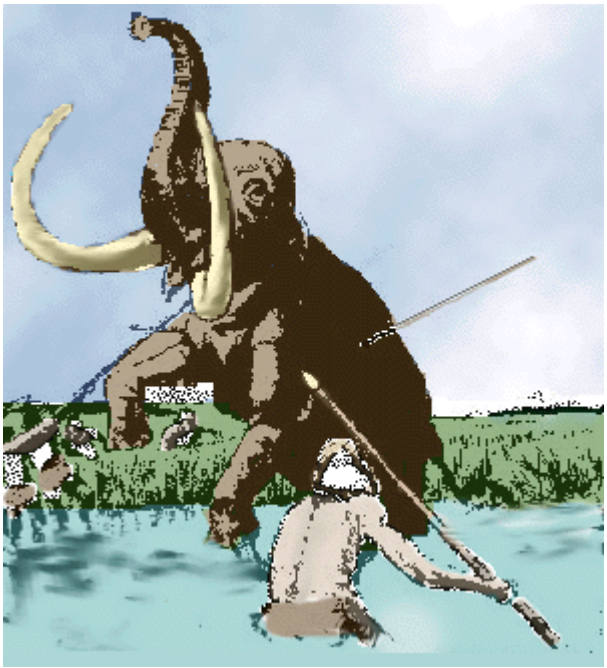
Quarries

Quarries are locations where raw material (chert) was mined and processed for tool manufacture, and they occur in the vicinity of outcrops at or near the ground surface addition to large chunks and nodules of chert, cores, flakes, and other evidence of fi stage manufacturing are generally recovered. When outcrops occur near a water sou residence site is often found nearby. Quarry sites are common in north central Floric (especially Marion and Alachua counties) (Purdy 1975, 1981), in the central Gulf coast a (especially Hillsborough County), in north Florida along the Santa Fe, Suwannee, an Aucilla Rivers, and in northwest Florida along the Chipola River.

Short Term Camps

These sites are small and often are described as lithic scatters. They are generally interpreted to have been occupied while hunting and gathering. Many may be kill si where the bones of the prey have long since disappeared. Artifact samples consist o expedient tools and debitage from resharpening or shaping. As is always the case, cannot be identified as Paleoindian without the recovery of at least one diagnostic projectile point. Although these sites are more likely than base camps to consist of single archaeological component, they commonly underlie Archaic lithic scatters (e. the Scott Springs [8MR1875], Silver Springs [8MR59], and Bolen Bluff [8AL439] sit

Kill Sites



Paleoindian artifacts have been found in association with animal bones in a number o locations in rivers, sinkholes, and spring run (e.g., the Guest Mammoth [8MR130] and Li Salt Spring [8SO18] sites). Animals were ki and/or butchered at these sites. The artifac inventory is similar to the short term camp including projectile points, utilized flakes for cutting and scraping, and waste flakes from or resharpening. Most of the river finds are thought to have come from kill sites; howev because they are found in deflated, mixed contexts the association of the bones and artifacts is often in question.

Isolated Projectile Points

Most of the diagnostic Paleoindian artifacts are recovered without associated materials. While they provide little in the way of information, they are useful indicators of human geography and technological diversity. Isolated projectile points are often found in the rivers and sinkholes of north central Florida, and on the surfaces of river banks and hilltops. Projectile points are also occasionally dredged from marine channels or found on sand bars at low tide by fishermen in the Gulf of Mexico (Goodyear et al. 1983).

Important Sites

The Thomas Creek Archaeological District (8SR338) containing Paleoindian sites is lo in Santa Rosa County and is also listed on the National Register. Other important sit include the Page-Ladson site (8JE591) in northwest Florida; the Butler site (8SU2/8(the Silver Springs site (8MR59) (Neill 1958; Hemmings 1975), Bolen Bluff site (8AL4 (Bullen 1958a), and Guest Mammoth site (8MR130) in north central Florida; the Har Flats site (8HI507) in central Florida; and the Cutler Fossil site (8DA2001) in Dade C (Carr 1986).

Research Questions

In general, testing programs geared toward locating Paleoindian sites, which may be deeply buried, are needed. One strategy might be to retest known Archaic sites to determine if Paleoindian sites are underneath.

Chronology

Trends in artifact patterning (distribution and morphology) are largely undocumente within the period. Diachronic studies of artifacts from stratified sites will be required address these questions.

Stratigraphically secure archaeological contexts containing diagnostic artifacts and d materials are needed in order to reinforce or modify our beginning and ending dates the Paleoindian period.

Technology

Although our knowledge of the Paleoindian artifact assemblage is essentially limitec items made of stone, organic materials were certainly used for tools and tool-makir clothing, shelter, ornaments, ritual objects, and containers. Skins, wood, and plant were probably important raw materials. Marine shell may have been an important resource on the coast. It is necessary to discover and excavate wet sites with prese

organic materials in order to assess these hypotheses.

Now that the typology for Paleoindian projectile points and other associated lithic tc well-developed, artifact analysis should focus on the assemblage rather than the ite Discovering and interpreting varieties and variation in technique and form should b goal if we are to address questions of human interaction and patterns of behavior. Emphasis should be placed on increasing our perception of variation in artifact patt through morphometric analysis. We are not yet so knowledgeable about Paleoindia assemblages that we can afford to lose this kind of information.

Settlement Patterns Questions

- Most known sites have been found near water and chert outcrops, areas of karst erosion. Does this pattern accurately reflect Paleoindian settlement behavior?

- What is the range of Paleoindian site types and how do they reflect behavior (e.g., kill sites and base camps both really exist)?

- How much do factors introduced by archaeologists (e.g., ease of survey and site detection and expectations of site location) affect our perception of Paleoindian settlement patterns? We know that most sites are found on high ground near wat but how many are not?

- How nomadic or sedentary were the Paleoindians?

- Did mobility vary from region to region? What were the rhythms of movement?

- What were the ranges of movement and site catchment size?

- Did the settlement pattern involve moving in and out of a wide diversity of habitat

- When living in riverine, lacustrine, and/or coastal (now submerged) areas, were g more sedentary and socially circumscribed than in other areas?

Subsistence Questions

The hunting of large game has been considered an important aspect of Paleoindian subsistence. In recent years, other models emphasizing smaller game, and plant an maritime resources have been suggested.

- What proportion of the diet was provided by plants and by aquatic foods?

- Was there a Paleoindian maritime tradition?

- How important was the meat from large (now extinct) animals in the everyday die

- What proportion of the diet was provided by small game animals?

- Was there regional variation in subsistence strategies, and if so, how did this affec cultural development?

Social Organization

Although we have no information on social, political, or religious systems, it is gener believed that Paleoindian social structure was egalitarian (social distinctions were ba on age, sex, and personal abilities). This assumption is based on surveys of ethnographic hunting/gathering societies in which the majority are simple, band lev groups. Factors generally associated with the development of more complex societie high population density, competition for resources, social and environmental circumscription-were lacking. Therefore, most investigators believe that the Paleoin operated at a band level of organization since they had a low population density and relatively unlimited access to resources.

- How might Paleoindians have marked social status, if distinctions were made?

Among contemporary hunters and gatherers, women often eat less meat than men. though they often contribute the largest proportion of calories to the group diet thro the collection of plant foods and some easily collected animals, women do not share equally in consumption of meat. If meat from large game (megafauna) was not an everyday fare, it may have acquired a higher value than other, more common, foods this respect, big game hunting may have played a role in the social organization of t group beyond the scope of subsistence by reinforcing unequal access to a preferred (big game meat). Anthropologists have documented in scores of societies the ascrip value to rare or hard-to-obtain goods.

As with most archaeological research, these and other research questions should be addressed through interdisciplinary methodologies such as employing fossil pollen st or dating buried land surfaces through geological interpretation, or by analysis of hu skeletal remains.

Preservation Goals

High on the list of preservation goals should be the location, evaluation, and conservation of intact, stratified residential or special purpose Paleoindian sites, especially in areas where information about this time period is poorly represented o absent. Traditionally, maximum survey effort is expended in geographic areas wher potential is thought to be greatest-i.e., where sites have been found in the past. By changing this pattern we can avoid the trap of reinforcing entrenched notions of

Paleoindian lifeways at the expense of gathering new information and developing ne ideas.

We have little data from the coasts and continental shelf or from the interiors of sou and northeast Florida, and a special effort should be made to locate sites in these a Surveys employing appropriate sampling strategies should target areas where sites predicted to occur based on paleoenvironmental reconstructions. Rather than write potentially productive areas because of high water tables or thick sediments, new techniques and tools should be developed.

Because of their potential to yield the preserved organic remains necessary for paleoenvironmental reconstruction and artifact analysis, Paleoindian wet sites consti an archaeologically significant site type in Florida at this time. Although none have b discovered yet, inundated intact Paleoindian sites in marine contexts are waiting for curating evidence of late Pleistocene coastal lifeways, and, perhaps, maritime adapta Deeply buried, stratified terrestrial sites contain information about both site structur artifact patterning that is one of the least understood aspects of Paleoindian archaeo The discovery and evaluation of these kinds of sites should be a priority for everyone interested in improving our knowledge and understanding of the first Floridians. The excavation of various types of sites, e.g., base camps, short term camps, special use sites, quarries, and kill sites, in all environmental settings, is essential. Significant si representing various types should be nominated to the National Register.

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