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RECONNAISSANCE SURVEY OF PREHISTORIC ARCHAEOLOGICAL SITES ON SANTA ROSA ISLAND, NORTHWEST FLORIDA

FT. PICKENS AND SANTA ROSA AREAS OF THE GULF ISLANDS NATIONAL SEASHORE

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INTRODUCTION

The purpose of this archaeological project was to relocate and evaluate the prehistoric sites on Santa Rosa Island (Figure 1) in the Santa Rosa and Ft. Pickens areas of Gulf Island National Seashore (GINS). The project was included in the National Park Service Visitors in the Park (VIP) Program through a course at The University of West Florida (UWF) taught by Dr. Judith A. Bense.

The field work and major report sections were done by students who received course credit for their efforts. Dr. Bense organized the project, directed the work, wrote several sections and edited the final report, and had the report prepared. There were nine previously recorded prehistoric archaeological sites in the two areas of GINS, all of which had been recorded prior to 1973 and and all of which had not been professionally re-visited in the intervening 11 years before this project. Each site was relocated, two radiocarbon dates were obtained from two shell middens on the island, and three new sites were discovered (Table 1). After a field evaluation of all 12 sites, only one appears to have survived the wind and water erosion to remain intact on the island. The other 12 sites appear to have been either wind deflated or water eroded. However, all sites contain useful and important information about the prehistoric lifeways on Santa Rosa Island.

RESEARCH DESIGN

Previous research in the Pensacola Bay System (Bense 1983) has identified that several patterns of settlement have occurred in the 12,000 years that human societies have inhabited the area. Today, as in the past, people organize their settlement in direct relationship to the resources on which they depend. The resources available in this area have changed through

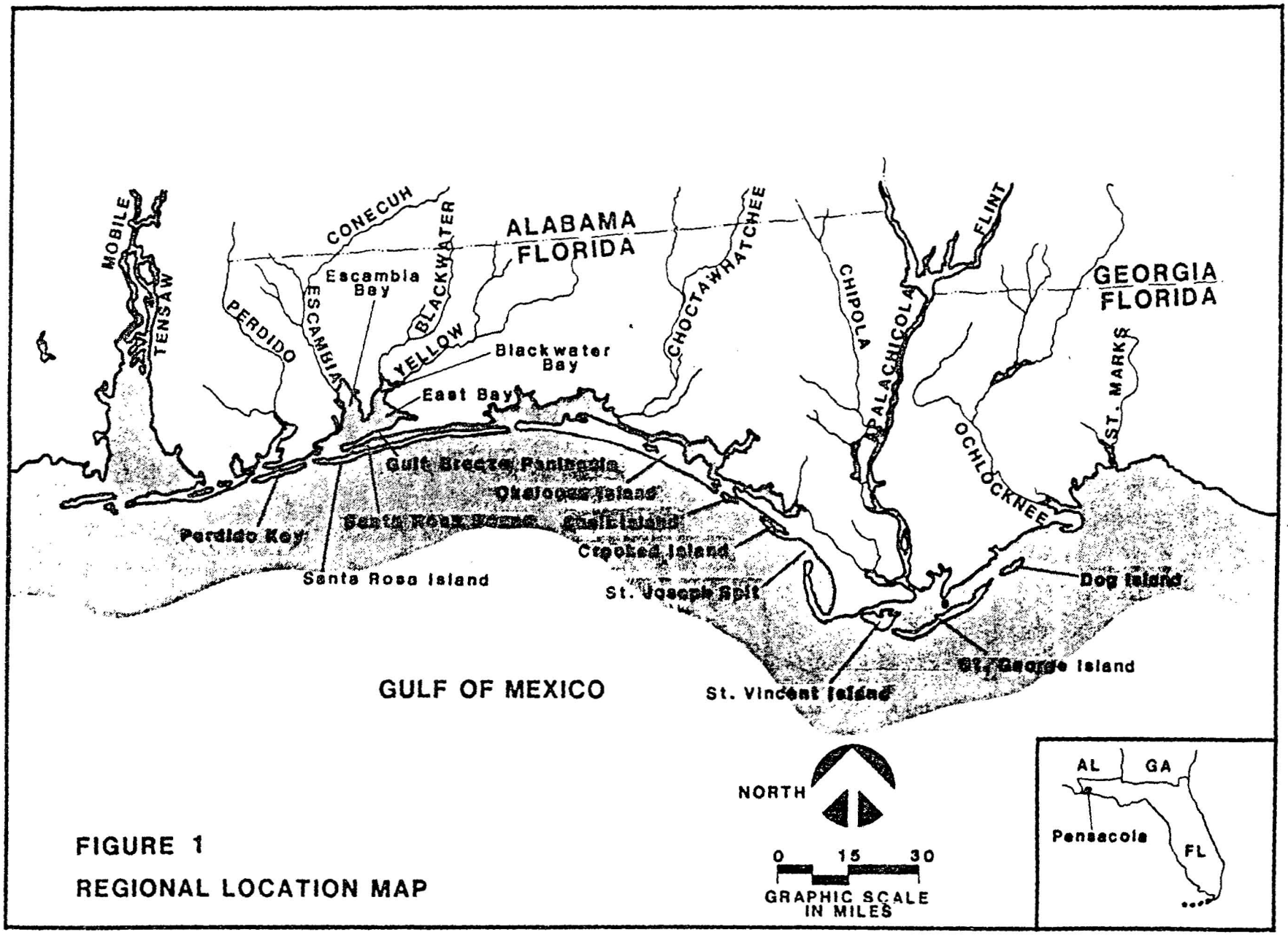


FIGURE 1

REGIONAL LOCATION MAP

TABLE 1. SITES RELOCATED AND DISCOVERED IN RECONNAISSANCE ON GULF ISLANDS NATIONAL SEASHORE

Site Number	Site Name	Area
8Es3	Five Miles West of Navarre	Santa Rosa
8Es4	First Site Opposite Woodlawn	Santa Rosa
8Es20	Ft. Pickens No. 1	Ft. Pickens
8Es22	Santa Rosa Pensacola	Ft. Pickens
8Es54	Management Area No. 1, Midden Complex	Santa Rosa
8Es55	First Storm Site	Santa Rosa
8Es60	Hidden Midden	Santa Rosa
8Es62	Bomb Site North Midden	Santa Rosa
8Es63	Young Site	Santa Rosa
8Es1291	Pine Hammock (newly discovered)	Santa Rosa
8Es1292	Picnic Site (newly discovered)	Santa Rosa
8Es1293	Big Clam Site (newly discovered)	Santa Rosa

time as the landscape and technology have developed. The primary causes of environmental change have been sea level fluctuation, temperature and amounts of effective precipitation.

Our research has shown that from initial occupation of the area to approximately 4,000 years ago, the populations were primarily exploiting the interior river valleys and fresh water swamps. Approximately 3,000-4,000 years ago there was a shift of population from the river valleys to the lower portions of the Pensacola Bay system, especially Pensacola and East Bays. Here the population greatly increased and remained concentrated until Spanish contact in the 16th century. There was some resettlement of the river valleys and upper bays in the Late Woodland (Weeden Island) and Mississippian (Pensacola) periods, but the bulk of the population appears to have been located along the coastal strip.

Our explanation for this phenomenon is that approximately 4,000 years ago, the marine ecosystems had developed to a point where new sources of food were available that could be procured more easily than the previously exploited non-marine food resources. The environmental factors which most likely triggered the availability of these new food sources are:

1. Sedimentation of the bays
2. Stabilization of sea level
3. Development of grass beds which are good fish habitat
4. Migration of fish into the bays as larvae and juveniles to feed
5. Development of oyster and clam beds

These environmental processes occurred on a world-wide scale, and this phenomenon of coastal population increase has been documented in most continents (Pearlman 1982).

Our research (Bense 1983) has shown that the Gulf Breeze peninsula (Figure 1), especially the western half, was the preferred area for the last 4,000 years of the prehistoric period. The settlements which are located there are large, complex, and often have ceremonial facilities such as cemeteries, burial and temple mounds. This area is well known and has received much attention in literature (Lazarus 1961; Phelps 1969; Tesar 1973). There are many large shell middens which appear to be base camps on the Gulf Breeze peninsula, especially the southern shore along Santa Rosa Sound. We hypothesize that it is from these base camps on the peninsula that resource collecting groups originated and returned with harvested food. The sites from these forays, known as satellite camps, are significantly different from the base camps and are characterized by their temporary nature. The archaeological remains are sparser and usually contain a narrow range of materials due to the special purposes of the satellite camps.

With this background information, we expected the prehistoric sites on Santa Rosa Island to be the results from small special-purpose groups from the base camps on the Gulf Breeze peninsula. The harshness of the island plus the few number of forests for protection from the sun and wind increase the likelihood of small temporary camps being the primary site type. Food resources that are present on Santa Rosa Island include fish, birds, and shellfish from both the sound side marshes and the Gulf surf zone.

Based on the above data and explanations of it, the hypotheses of the prehistoric uses of Santa Rosa Island were as follows:

1. Small special purpose groups occupied the island for short periods of time during which they harvested and prepared food resources for transport to their main base camp off the island.
2. The food resources exploited were primarily marine: shellfish and fish.

If these hypotheses are correct, then the expected archaeological record on Santa Rosa Island would be as follows:

1. Occupation should have begun approximately 4,000 years ago correlating with marine resource availability.
2. Sites should have the characteristics of small satellite camps.
3. Sites will be located on the sound side of the island and associated with shellfish remains.

ENVIRONMENTAL DESCRIPTION

Santa Rosa Island, located along the Florida panhandle, is separated from the mainland by Santa Rosa Sound (Figure 1). It extends from the mouth of Choctawhatchee Bay approximately 55 miles (63 km) to the mouth of Pensacola Bay. The mouth of the Choctawhatchee Bay is kept open through dredging and is difficult to keep open. It likely was often naturally closed, making the island actually a peninsula and changing the ecology of that bay markedly.

Santa Rosa Island has a humid warm-temperate climate. The average summer temperature is just over 80° F, but the latter part of June and for the most part of August, temperatures reach 90° F or more. The average winter temperature is 55° F and as low as 15 to 20° F for a few days in the winter (Ringold 1980:13-17).

GEOLOGICAL SETTING

Santa Rosa Island is a barrier island which formed during the early Holocene period (Otvos 1979:15). It is fronted by the Gulf of Mexico and backed by Santa Rosa Sound. As the word barrier implies, Santa Rosa Island is a barrier that provides a buffer zone between the mainland and the Gulf. The

dynamic features of a barrier island includes beach, dunes and dune ridges, and lagoons (Williams 1974:26). Santa Rosa Island is composed of barrier deposits which formed during the Holocene period. Due to the littoral drift and wave action, open nearshore sediments were deposited along the Gulf shore on the island from a sand source just east of Destin. As the sediments increased, Santa Rosa Island gradually grew out of the Gulf growing generally westward to the present terminus at the mouth of Pensacola Bay (Otvos 1979:15). The presence of Santa Rosa Island and Perdido Key has narrowed the opening of the Bay to less than one half mile and has greatly slowed the current in the bays. However, the tidal current maintains a permanent natural deep channel at the mouth of Pensacola Bay.

DEPOSITIONAL AREAS ON SANTA ROSA ISLAND

Beach

The beach is defined as that area that extends between the outermost breakers and the landward limit of the wave action. This area includes the shoreface, foreshore, and backshore (Figures 2 and 3).

Shoreface

The shoreface is defined as the zone of nearshore currents. It extends from the low water level seaward to the point known as the "effective wave base." The shoreface is composed of very well sorted medium grain quartzite sand. High wave energy keeps clay from settling along the shore. The shoreface is a very broad area extending out into the gulf approximately 4.5 km. It has a very gentle slope out to approximately 20 m where it becomes erratic. The bottom is smooth to a depth of approximately 10 m or to the edge of effect wave base, beyond which it is rippled and irregular.

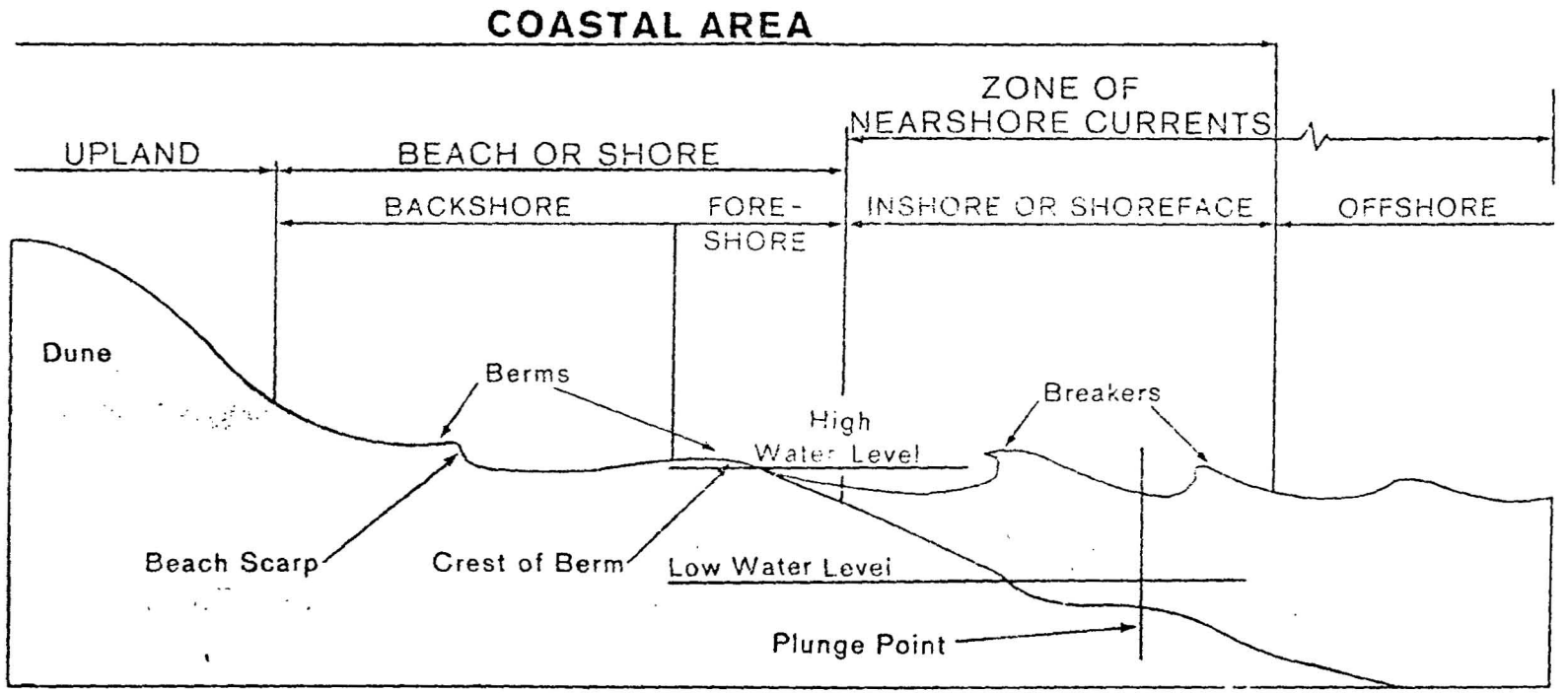


Figure 2. Physiography of Seaward Portion of Barrier Island (from Leatherman 1982)

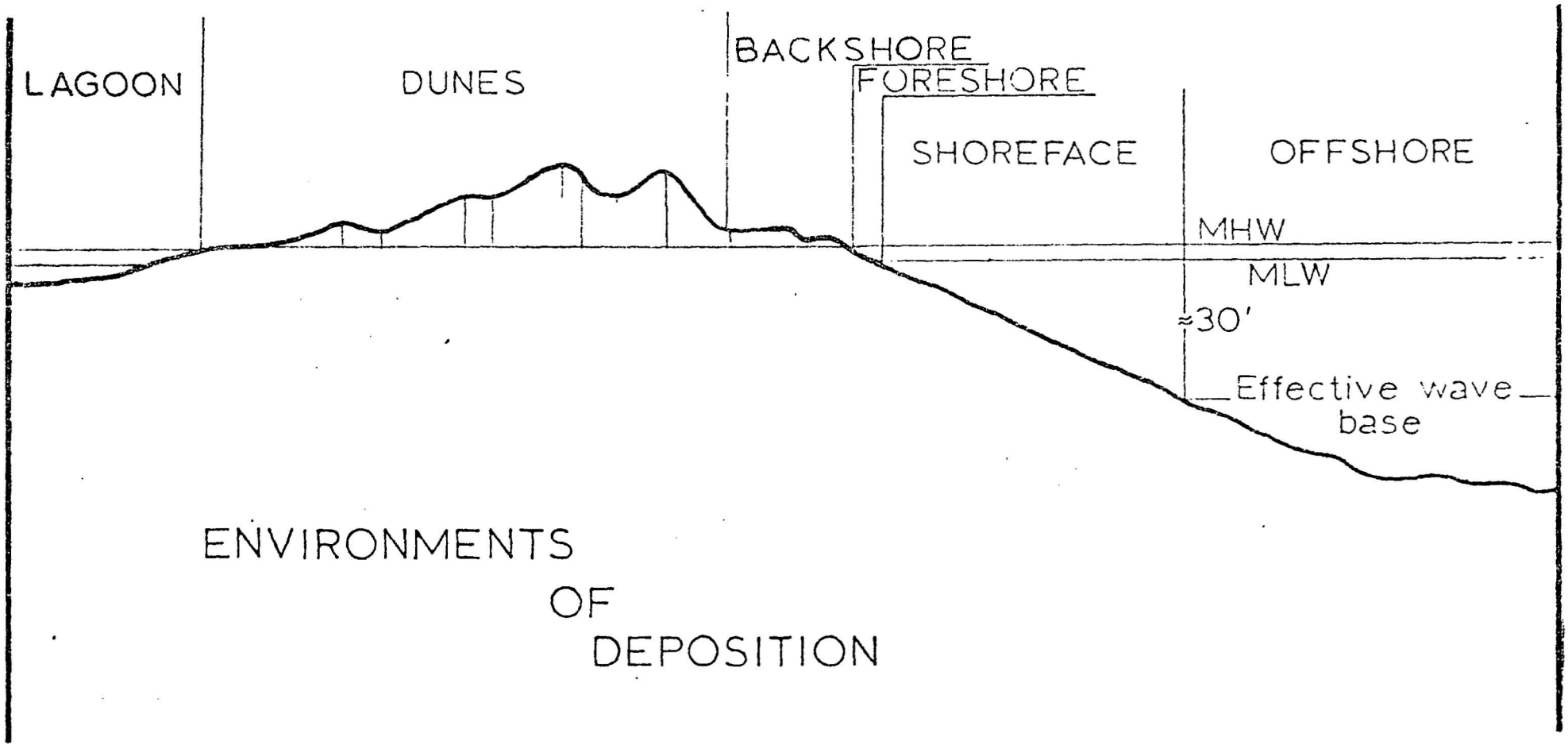


Figure 3. Environments of Deposition on Barrier Island (from Williams 1977)

Foreshore

The foreshore is the intertidal zone that lies seaward of the berm crest and is the area most affected by swash action. It is composed of well sorted medium grain quartzite deposited by microtidal energies. Santa Rosa Island has an active tidal range of 0.5 m to 0.8 m (Otvos 1979:15). The foreshore is a dynamic environment where changes occur rapidly and often. It has a steep slope of approximately 9-15 degrees (Williams 1974:53).

Backshore

The backshore is defined as the area from the edge of the upland, or beach, to the foreshore and includes the summer and winter berms. Wave action rarely reaches this zone except during extremely high tides or coastal storm activities. Sediments originate in the foreshore area and are preserved by beach progradation. Aeolian sand can also be deposited around drift lines formed by organic debris. These small accumulations can eventually form into small dunes which, in time, can form a new primary dune line (Leatherman 1982:19-23).

Backshore sediments are comprised of well-sorted medium grained sand of almost pure quartzite with some concentrations of shell fragments and heavy minerals. The backshore is gently sloped at approximately 6-9 degrees (Williams 1974:43-46). Rippling occurs frequently due to high wind energy. Layers of shells and minerals are caused by swash action and heavy storms. Occasionally, washouts will occur, but only during violent storm activities like hurricanes.

Dunes and Dune Ridges

Dunes and dune ridges form the uplands of barrier islands. Vegetation is very important to the building and stabilization factors associated with dune

development (Redick n.d.:35). The formation of dunes and dune ridges originates in the sand deposits along the backshore, which are blown up into the vegetation. Dunes are the islands first and most important defense against coastal storms and floods. They are composed of aeolian deposited well-sorted medium grain quartzite sand with a small amount of shell fragments and organic debris.

Dunes and dune ridges can be divided into three distinct categories (Williams 1974):

1. Old - low dune ridges, well vegetated and stabilized
2. Irregular - dunes with sufficiently well established woody vegetation and somewhat stabilized. Erosion and migration are still active systems.
3. Well Developed - dune ridges along present barrier shorelines; distinctively parrallel, usually two to three meters high.

All categories of dunes have gentle seaward or landward slopes with some rippling at the base of the foredunes. Seaward slopes have been observed up to 30-40 degrees with slopes and maximum dune heights of 12-19 m.

Lagoons

Lagoons or sounds are large shallow bodies of open water that are protected from ocean forces by a barrier island. The back barrier, or lagoon side, is usually fringed by narrow sand beaches which give way to marshes. Most marshes are brackish water environments which support grass beds. Tidal flats do occur, but are restricted to the tidal zone (Leatherman 1982:44-45).

Santa Rosa Sound beaches are fine to medium grain well sorted quartzite sand. Heavy mineral concentrations are found in the tidal flats and marshes. The sand is consistent to a depth of 1-1.2 m (Williams 1974:27-28). The deeper sediments are soft and muddy.

Santa Rosa Sound is approximately 7.5 m deep, 0.4-3.3 km wide and 84 km long. The sound is fringed by narrow beaches and marshes. The foreshore is gently sloped 2-6 degrees toward the lagoon (Otvos 1979:15,27).

FLORA AND FAUNA

Flora

Salt is the one most important limiting factor of plant life on Santa Rosa Island (USDI 1984). Near the Gulf shore, the dune communities (Figure 4) are characterized by grasses which are tolerant of high salt levels. The forest zone supports shrub size trees and other plants behind the primary dune line where they are protected from the salt spray. Freshwater collects in marshes among these older dunes, allowing taller trees, such as pines, to grow. The salt marsh zone is characterized by grasses tolerant of high salt levels.

Fauna

Santa Rosa Island encompasses a diversity of habitats from freshwater marshes to beaches. Each area provides a special environment for a variety of animal life. Animal life on the island is limited primarily by the plant life, which provides food and shelter (Table 2).

Along the gulfside beaches, ghost crabs inhabit burrows near the backshore to the crest of the summer berm. The foreshore also provides a special habitat for the mole crab, southern coquina, and sand fleas (Williams 1974:30-32). The dune environment supports many reptiles, birds and mammals. Along the soundside beaches, there is an abundance of crabs, crustaceans and gastropods. In addition, the marsh and sound bottoms contain a wide variety of bivalve shellfish including oyster, marsh clam and Mercenaria clam.

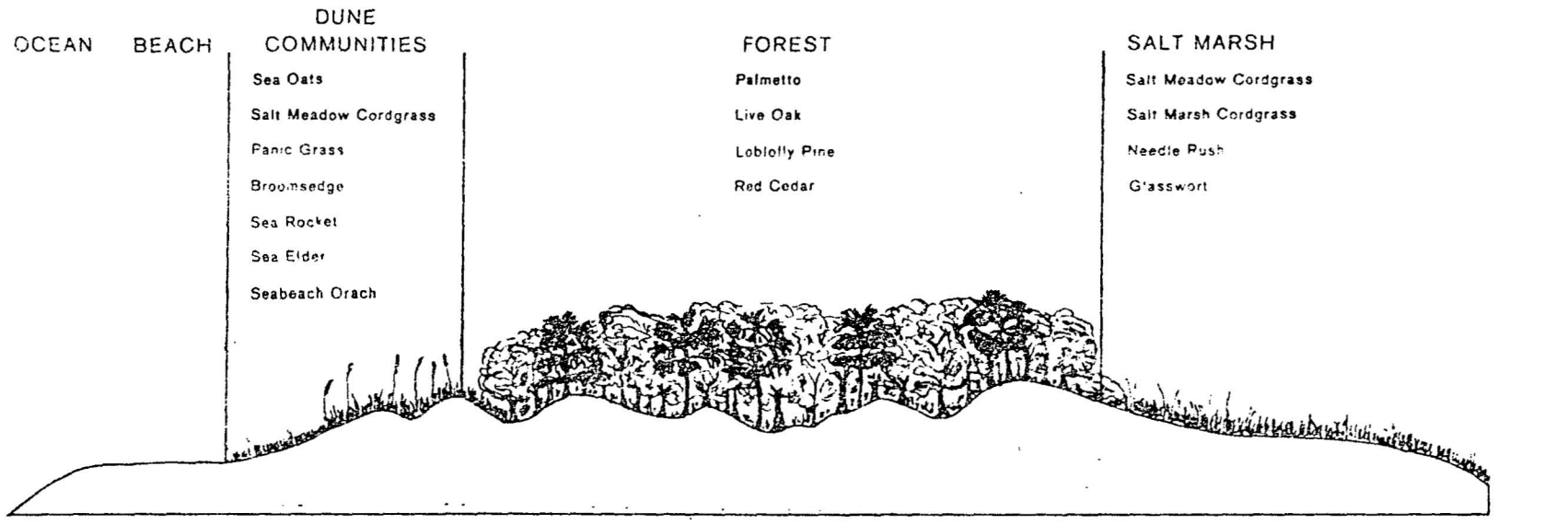


Figure 4. Barrier Island Vegetation Zones (from Leatherman 1982)

Table 2. LIST OF FAUNA ON SANTA ROSA ISLAND

BIRDS

Mockingbird
Fish Crow
Rufos-sided Towhee
Black Skimmer
Brown Pelican
Great Blue Heron
Brown Thrasher
Red-wing Blackbird
Cardinal
Cormorant
Willet
Barn Swallow
Blue Jay
Laughing Gull
Little Tern
Sanderling

MAMMALS

Grey Squirrel
Striped Skunk
Beach Mouse
Atlantic Bottle Nosed Dolphin
Racoon
Eastern cottontail
River Otter

REPTILES & AMPHIBIANS

Eastern Diamondback Rattler
Cottonmouth
Black Racer
Green Treefrog
Leopard Frog
Six-lined Race Runner Lizard

MARINE LIFE

Ghost Crab
Mole Crab
Mollusks
Sand Fleas
Mercenaria Clam
Polymesodo
Marsh Clam
Oyster
Southern Coquina
Portugese Man-of-War
Gastropods
Blue Crab

MAJOR ENVIRONMENTAL ZONES

A barrier island is composed of several environmental zones including beaches, dunes, marshes, and flats (Figure 5), each with a distinct ecosystem. These zones include salt marshes and tidal flats, lagoons, barrier flats and dunes.

Salt Marshes and Tidal Flats in Lagoons

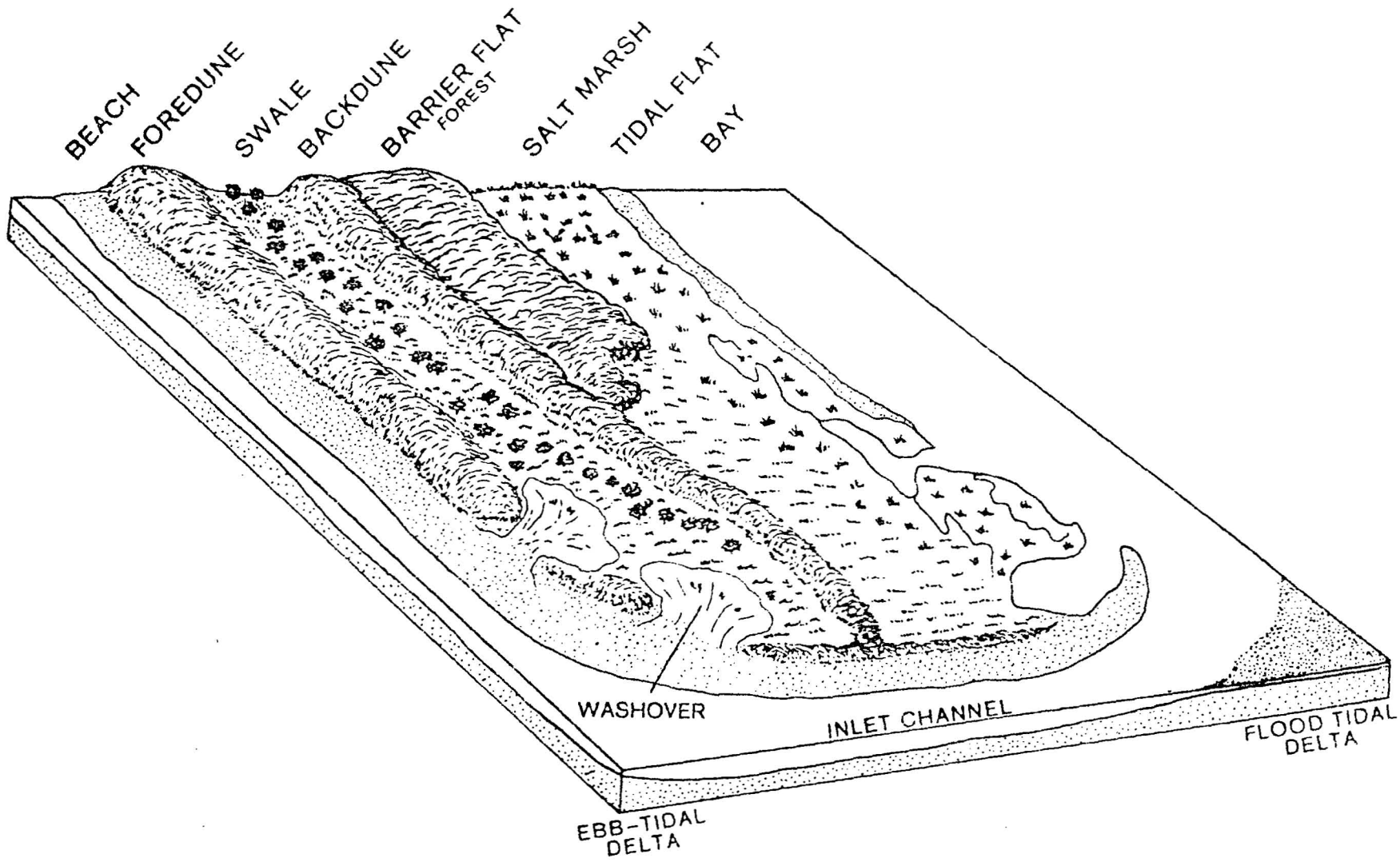
Barrier islands provide protection from open water, allowing salt marshes and tidal flats to form in the lagoons. These quiet bodies of water are primarily sand and clay in solutions (mud) deposited by tidal movements. Salt marsh vegetation communities are related to tidal influence and elevations (Figure 6). The lowest area is dominated by salt marsh cordgrass, which has a relatively high tolerance for salt in shallow water areas. On the other hand, the high marsh grasses (salt meadow cordgrass and needle grass) flourish in deeper water areas which have a lower salt tolerance (Leatherman 1982:35-36).

In addition to plant life, the intertidal zone provides an ideal habitat for birds, reptiles, and other wildlife to nest and forage. These include alligators, racoons, snakes and birds such as the Brown Pelican and the Great Blue Heron (USDI 1984). Bivalves, primarily oyster and marsh clams, also inhabit the muddy bottom of these marshes in beds of great numbers.

Fish also enter the lagoon from the Gulf and Pensacola Bay as larva and juveniles. These are easily netted in the marshes of the lagoon and can become stranded in holes in the tidal flats at low tide.

Lagoons

The lagoon environment is rich in organic productivity. As a brackish water environment, it provides nourishment for grass beds and various types of algae. The grass, in turn, provides a suitable refuge for a thriving



Firgure 5. Barrier Island Environmental Zones (from Leatherman 1982)

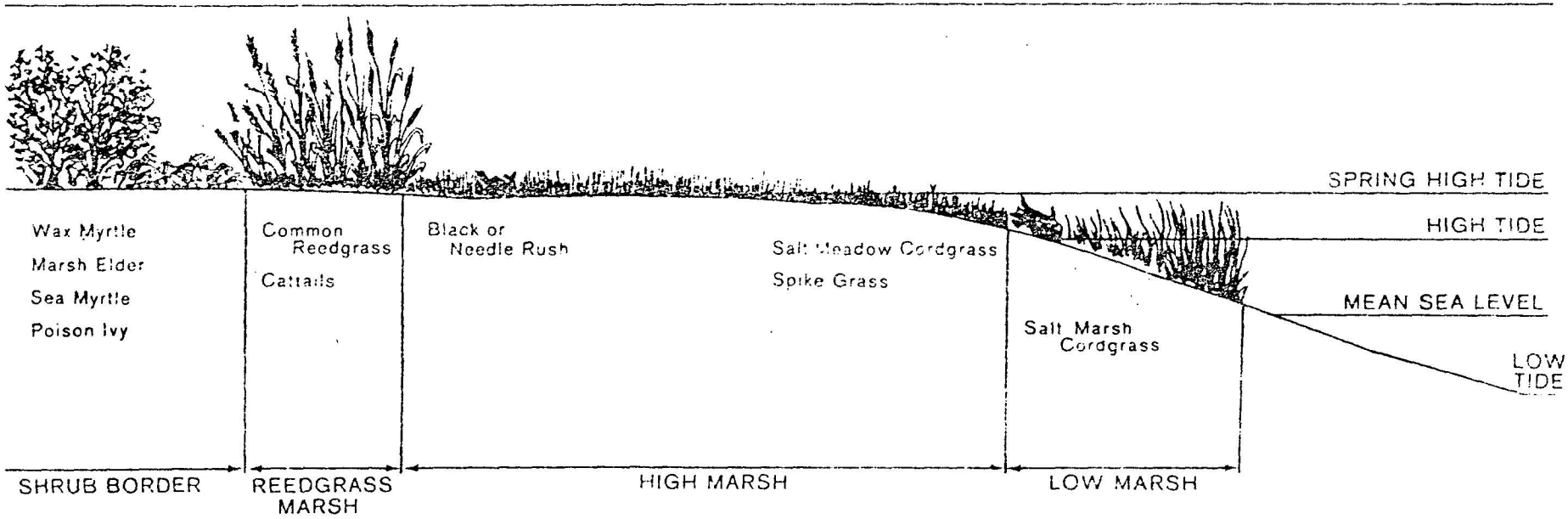


Figure 6. Vegetation Communities in the Salt Marsh Zone of Barrier Islands (from Leatherman 1982)

community of mollusks and crustaceans which includes shrimp, oyster, blue crab, and hermit crab (Williams 1974:30-32).

Barrier Flats

Barrier Flats are areas of the island that have no distinct topographic pattern. As a result, most flats are covered with meadow grass or small brush and are frequently buried by sand or flooded by overwash (Leatherman 1982:39-40). In some areas where the dune protection is well developed, tree hammocks and maritime forest can grow to the leeward side of the dunes. These areas are abundant with small rodents such as the field mouse. Other fauna includes snakes, especially the diamondback rattle snake, and birds such as the blue jay, cardinal and blackbird (USDI 1984). These hammocks are good human habitat with nuts as well as animals, and are a protected area from the sun and wind.

Dune Environment

The dunes are an ever changing environment. This area includes the primary dune line and the backdunes. Vegetation in this area is limited to plants with high salt tolerances due to the salt spray from the Gulf, primarily sea oats. As a result, wildlife in this area is quite limited. Furtherback, where the dune line is more stabilized with wooded shrubs of pine and oak, small sized fauna such as dune mice, lizards, and snakes survive (USDI 1984).

HUMAN NEEDS AND ENVIRONMENTAL ZONES ON SANTA ROSA ISLAND

The environmental zones of Santa Rosa Island have a definite ranking in relation to human needs of food and shelter.

First priority - Hammocks near lagoon and marsh shore
- protection from sun and wind with easy access to lagoon marshes
- more available food (especially shellfish and fish)

Second priority - Bases of high dunes
- protection from wind
- access to lagoon marshes

Third priority - Gulf area
- no protection from elements
- shellfish obtainable from surf zone

The island is generally a harsh environment and low in biomass useable by humans. The food resources are limited and unevenly distributed with the primary food resources of shellfish and fish in the lagoon and marsh areas. Terrestrial animals are small, hard to capture, and usually nocturnal and the plants are largely not edible by humans. There also is no agricultural potential for the island. This narrow specturm of food resources for the island limits the range of activities and group sizes possible on the island.

SUMMARY OF ENVIRONMENTAL DESCRIPTION

Santa Rosa Island is a barrier island extending from Choctawatchee Bay to Pensacola Bay, approximately 55 miles (63 km). It is separated from the mainland by a long, narrow, and shallow lagoon or sound. The island formed during the Holocene due to wave action and a westward drift of sand which is supplied from eroding Gulf dunes just east of Destin, Florida.

The major depositional zone on the island is the beach zone in which wave action deposits sand. The wind then carries the sand and forms dunes. As vegetation stabilizes the dunes, they align into rows parallel to the shore.

The island has several distinctive environmental zones. The limiting factor to the vegetation in these zones is salt spray. The areas near the Gulf are sparse in plant and animal life and the farther from this source supply, the richer the ecosystem. The marine ecosystems are limited primarily

by wave action. The Gulf shore zone has shellfish and crustaceans available seasonally. The lagoon marine ecosystems are extremely high in biomass and contain a wide variety of shellfish, fish and birds with occassional marsh hammocks nearby. The main resource area for humans on the island is the lagoon marsh area which are clustered along the sound coast.

NARRATIVE OF THE CULTURE HISTORY OF NORTHWEST FLORIDA

There are four cultural stages in Northwest Florida (Table 3); Paleo-Indian, Archaic, Woodland, Gulf Formational, Mississippian, and Historic. This section will give a general description of each of these periods.

Humans first entered Northwest Florida approximately 12,000 B.P. (Before Present) in a much different environmental setting than what we see today. Sea level was lower by about 100 meters, and the climate was cooler and drier. Fresh water was less available due to a lower water table. This lack of water concentrated human groups as well as animals around stream borders, river borders, and cenotes (sink holes). The predominant vegetation in this area likely was hardwood decidious forest and more open grass lands than we see today (Milanich and Fairbanks 1980).

There are very few recorded Paleo-Indian sites (10,000-14,000 BP) in Northwest Florida. Most of the known sites are concentrated in the central part of the State. However, several Paleo-Indian projectile point knives have been recovered from the south shore of Choctawhatchee Bay. The rise in sea level during the Holocene has very likely submerged most Paleo-Indian sites that were once along the coasts and river mouths. Paleo-Indian sites that are known in Florida occur primarily in and along rivers and springs in the big bend areas. In Northwest Florida, a few scattered points are found, but the Chipola River has produced the most Paleo-Indian material.

TABLE 3. PREHISTORIC CULTURAL SEQUENCE AND SETTLEMENT PATTERN FOR PENSACOLA BAY SYSTEM

STAGE	PERIOD	DATE RANGE(YEARS B.P.)	SETTLEMENT PATTERN	CULTURE NAME
ARCHAIC	EARLY	10,000- 8,000	Hunting and gathering in the river river valleys; nuts, berries, deer, and other small animals	KIRK
	MIDDLE	8,000- 5,000	Same with population slowly increasing	
	LATE	5,000- 3,000	Same with population slowly increasing some shifting to coastal areas in lower bays	
GULF FORMATIONAL	MIDDLE	3,500- 2000	Definite shift in progress from interior to coastal settlement locations; shift to increased marine food resources; pottery appears (fiber tempered)	NORWOOD
WOODLAND	EARLY	2,000-1,1700	Coastal shift completes; most sites located on coast of lower bays and marine resources are widely used; sand tempered pottery	DEPTFORD
	MIDDLE	1,700-1,400	Population based on lower bay coasts; base camps, burial mounds, sattelite camps in Santa Rosa Island; population increase; sand tempered potterey	SANTA ROSA-SWIFT CREEK
	LATE	1,400- 1,100	Population at peak on lower bay areas; new settlements now up in upper bays and stream valleys; mounds built on Gulf Breeze peninsula	WEEDEN ISLAND
MISSISSIPPIAN	EARLY	1,100- 500	Populations now in both lower bays (most) and in river valleys and upper bays; mounds continuing to be built on Gulf Breeze peninsula major ceremonial centers in Perdido and Mobile Bays	BOTTLE CREEK
	LATE	500- 300	Decrease in population due to introduction of European diseases; essentially the same culture.	BEAR POINT

Because of the lack of fully excavated sites, any attempt at reconstructing Paleolithic life in Northwest Florida is purely speculative. In other areas, Paleo-Indian peoples seem to exploit the same general types of flora and fauna other Paleo-Indian people in North America did during this time. This included the Pliestocene megafauna, smaller mammals, birds, fish, and many types of plants. The groups throughout Florida seem to be smaller than the groups in other Southeastern states. We do not find the large camps that are found elsewhere. This is probably due to the drier conditions that prevailed during the Late Pliestocene due to the greatly lowered sea level and water table.

The Archaic stage (10,000 - 3,000 BP) was also based on hunting and gathering, but there was a shift away from the hunting of Pliestocene food sources to that of the Holocene or modern types as the flora and fauna changed to modern ecosystems. They were hunters and gatherers that had a subsistence base of seasonal exploitation of the resources available in a defined area.

During the early period of the Archaic (10,000-8,000 BP) in Northwest Florida, environmental conditions had become warmer and drier than in Paleo-Indian times. Sea level had risen rapidly and was continuing to rise, flooding the coasts and backing up streams, actually improving available water for plants and animals. New and abundant food sources appeared and were utilized (deer, small game, nuts). Social organization also appears to have changed. Archaic sites are larger indicating larger groups of people living together than during the previous Paleo-Indian period, and general population appears to have increased. The larger sites are explained by the groups assembling when seasonal abundant resources become available (such as nut crops and deer rutting season) that could support large groups of people. The tool kit becomes more diversified during the Archaic reflecting a broad range of resources and activities.

The Middle Archaic (8,000-5,000 BP) in Northwest Florida is poorly understood, but there is some evidence in Central Florida. The large base camps have large and organized cemeteries associated with them indicating more complex social organization and ceremonial systems. The base camps have large tool kits associated with them, while resource extraction sites have a smaller more specialized range of tools. Available water increased during this period, and vegetative patterns became essentially modern (Milanich and Fairbanks 1980:54-60).

The Late Archaic (5,000-3,000 BP) is similar to the Middle Archaic in subsistence patterns and tool kits, but is not well documented in Northwest Florida. The tool kit of the Late Archaic seems to be less varied than the Middle Archaic, yet this could be due to sampling error because of the limited number of sites that have been examined (Milanich and Fairbanks 1980:60-64).

In the specific area of the Pensacola Bay Drainage, Early and Middle Archaic sites are located primarily in the Escambia river valley in areas where they would have access to many resources, such as nut groves, deer herds and fish. Base camps are located along the tributaries and on the mainstream (Escambia). Early and Late Archaic sites have also been documented along the north shore of Pensacola and Escambia Bays. Archaic subsistence followed the same hunting, gathering, and fishing strategy as other contemporaries in the Southeast (Bense 1983).

The addition of ceramics to the material culture assemblage in Northwest Florida occured approximately 3,500 years ago and identifies the Gulf Formational Stage. The crude, fiber-tempered ceramic vessels were added to the Late Archaic inventories and most researchers agree that this signals both a more sedentary way of life and initiates a break through in food preparation which expands and improves the aboriginal diet.

The Woodland stage (2,000-1,100 BP) follows and geographically encompasses all of eastern North America. This broad stage is characterized by rising population densities, increasing use of marine resources, agriculture, and public earth works, expanding interregional trade, and large nucleated settlements (Wenke 1980). The population in Northwest Florida now appears to be concentrated along the coastal strip, especially the lower bays, beginning in the Early Woodland period.

In Northwest Florida the first recognized Woodland culture is known as Deptford. The former hunting and gathering patterns of the Archaic times seems to grow more specialized. It is interesting to note that Late Archaic and Norwood (fiber-tempered ceramics) components are often the initial deposits in coastal shell middens. It is these cultures that make the shift in northwest Florida's Indian population from the interior (especially river valleys) to the coast to utilize the new marine resources.

The Deptford culture are encompassed the Gulf Coast from Pensacola to Tampa Bay, and the Atlantic coast from the Cape of Fear, North Carolina to St. John's River near Jacksonville (Milanich and Fairbanks 1980:66). The temporal marker for this culture is their stamped pottery which has been classified into simple stamped, and linear check stamped (Willey 1949). For a description of these and all other pottery types referred to in this section see Willey 1949.

Deptford sites seem to be located near oak and magnolia hammocks and adjacent to salt marshes along the coast. The location of Deptford sites makes possible the exploitation of resources from oak and hickory hammocks, bays, and marsh areas. The plant and animal remains at Deptford sites indicate that they exploited many different biomes and got the most resources for the least amount of time. The number of species that were used is very

large and include animals such as the white tailed deer, racoon, opossum, rabbit, pocket gopher, bear, bobcat, tortoise, box turtle, and the Florida panther. Documented plants exploited include hickory, acorns, the Similax, blueberries, persimmons, and muscadine (Milanich and Fairbanks 1980). Deptford social organization was probably small bands (Willey 1949). Sites have a general lack of stone tools which is likely due to the lack of stone in most coastal areas. A single component Deptford site has recently been intensly investigated on the north shore of Pensacola Bay (Bense 1986). This information indicated that this cultural period existed here from 2,000-1,750 BP and utilized a wide range of marine resources.

Ceremonialism was rising throughout the Deptford period. Northwest Florida's inhabitants likely acted as middle-men in trading marine food, conch shell, and probably cassina leaves (used to make black drink) of coastal Florida for the copper, stone, ceramics, and exotic artifacts of the interior (Milanich and Fairbanks 1980:84).

The Deptford pottery tradition gave way to the Georgia-based Santa Rosa/ Swift Creek pottery tradition in Northwest Florida around 300-600 AD. Sites of this time period are located in the same general areas as Deptford in the Pensacola area and the way of life seems to remain unchanged.

Pottery of this period includes rocker and complicated stamped ceramic types with a few incised and punctuated types. Vessels were a variety of shapes including small bowls and deep cylinders with conoidal bottoms.

Subsistence is very similar to the Deptford period: hunting, gathering and fishing. Initial use of cane is also recorded in Northwest Florida. The use of burial mounds and associating the dead with exotic grave goods increases during this period also. Burial goods were placed beside the body. Occasionally more than one village would share a mound.

The next Woodland period is Weeden Island (600-900 AD) which seems to have developed out of the preceeding Santa Rosa Swift/Creek. Sites continue to be located along the coast and inland bays with increased spread into the interior river valleys. A characteristic of the coastal sites is extensive shell middens. Burial mounds now appear adjacent to villages. Several regional chronologies have been established for the Weeden Island period, but the most applicable one is by Fairbanks and Milanich (1980) in which Weeden Island is divided into early and late periods marked by pottery styles and burial mound traits.

Inland Weeden Island peoples depended upon gardening much more than coastal peoples. Coastal subsistance followed the same basic pattern as before, and evidence of its success is seen in population growth which seems to have increased. There are five times more late Weeden Island sites than Santa Rosa/Swift Creek. Movement inland is initiated during this period and is very likely directly related to the need for better soils for agriculture (Milanich and Fairbanks 1980).

Burial of the dead was done in much the same fashion as Santa Rosa/Swift Creek times, but pottery and grave goods were not placed with the individual, but in mass caches in the side of the mound. Caches were usually placed in the east side of the mound (Willey 1949).

Weeden Island appears to have gradually changed approximately 900 - 1,000 AD into a Mississippian type of culture. This way of life is generally characterized in the interior valleys (Apalachicola and Tallahassee area) by intensive agriculture of corn, extensive public works projects such as temple mounds, a chiefdom level of social development, and highly stratified society. "Collectively, Mississippian communities represent the high point of cultural

evolution in aboriginal North America, particularly in terms of geographical extent of influence, ceremonialism, public works, technology, population densities, and social stratification" (Wenke 1980:681).

In Northwest Florida, there are two recognized variants of the Mississippian period: Fort Walton and Pensacola. The Fort Walton variant is the inland variant and is characterized by an agricultural-based economy with sand and grit temper pottery. The Pensacola variant is coastal and characterized by hunting, gathering, and fishing economy with shell tempered pottery.

The interior sites are larger than those on the coast. Agriculture was practiced to a greater extent than previous times. Charred maize kernels have been identified in six Northwest Florida sites. The diet of the inlanders was supplimented with squash, beans, hunting and gathering of wild foods. Sites on the coast still relied on old methods of hunting, gathering, and fishing (Milanich and Fairbanks 1980).

Pottery is decorated with a variety of designs. It includes incised curvilinear designs with volutes, scrolls, loops, and circles. Check stamps also make up a small percentage, but the majority of Mississippian pottery is plain (Milanich and Fairbanks 1980).

Ceremonially, the Fort Walton period is the high point in Northwest Florida. Small numerous ceremonial centers began to decrease in number and increase in size, indicating a shift in social structure from many small autonomous tribes to several large chiefdoms (Willey 1949).

Burials were less standardized and less elaborate than in preceding Woodland times. The dead were buried in cemeteries, temple mounds, and burial mounds. One common trait was a pot inverted over the head of the individual (Willey 1949).

The Mississippian period for Northwest Florida lasted until contact (1559-1700). Contact also marks an extreme population decrease due to the introduction of European diseases such as small pox (Milanich and Fairbanks 1980).

From 1570 onward, Europeans dominate the cultural history of Northwest Florida. The population was decimated by European diseases, and the native Pensacola Indians were removed to South America by 1700. Other Indian groups, however, moved into Northwest Florida, fleeing from Euro-American aggression. This period is characterized by European trade items associated with aboriginal groups and new aboriginal types of pottery such as Mission Red Filmed, Aucilla incised, Pensacola Brushed, and Jefferson ware (a complicated stamped pottery) also appear. Many of the older types of pottery still exist but in diminishing percentages. The Mississippian style of subsistance still prevailed, however society was being re-organized toward the mission churches and the dead were often treated in the Christian tradition (Willey 1949).

The history of the European use of the Pensacola area of Northwest Florida centers on efforts to control the mouth of Pensacola Bay. All Euro-American uses of Santa Rosa Island in particular have been associated with fortifications capable of preventing entry into the harbor. It is only in the last 40 years that military-related occupation of the island has not been a major settlement function.

The first attempt at using Santa Rosa Island for this purpose was done by the Spanish in 1722. In response to French pressure on the Gulf side of Florida, the Spanish decided to fortify the bay before the French. They sent Don Alejandro Wavehope, a Scottish mercenary, with a small force to Santa Rosa Island in hopes of establishing a persido on Santa Rosa Island. A year later he was replaced as commander and the fort reportedly fell into disrepair. On

November 3, 1752 a hurricane struck the island and destroyed all the buildings except the hospital and a store house. The Spanish then decided that Santa Rosa Island was too dangerous and moved their main garrison to the mainland in the vicinity of present-day downtown Pensacola where they kept a small block house and battery. The island was given to the English in the Treaty of Parks in 1763 (Coleman 1982). The first Spanish fort (8Es22) is located in the Ft. Pickens area of Gulf Island National Seashore.

The British occupied Pensacola from 1763 until 1781. They intended to use Santa Rosa Island to compliment the defenses they had already built on the mainland directly opposite the islands' western tip: the Red Cliffs Royal Navy Redoubt. However, due to lack of funds, the British were never able to complete the island fortifications.

Northwest Florida was succeeded back to Spain in 1781. The Spanish also tried to build a battery on the western tip of Santa Rosa Island, but it was not completed. In 1821, Florida was incorporated into the United States. In 1825 the United States decided to use Pensacola as a Naval yard and built a three-fort system to defend their new Navy base. This defensive system consisted of Fort Pickens on the western tip of Santa Rosa Island, Fort McRee on Perdido Key directly opposite to the west, and Fort Barancas directly to the south on the mainland. These fortifications were completed in 1859.

After the Civil War, Fort Pickens fell into a period of disuse until 1898 when several large guns were mounted on a platform in the middle of the fort, called the battery of Pensacola. During the World War I period, Fort Pickens served as a training camp for artillery crews, and during World War II the western tip of Santa Rosa Island was fortified with added batteries to defend the Navy yard from Axis powers (Coleman 1982).

SUMMARY OF THE CULTURE HISTORY OF NORTHWEST FLORIDA

The culture history of Northwest Florida is divided into six basic stages of development: Paleo-Indian, Archaic, Gulf Formational, Woodland, Mississippian and Historic. Throughout the history of the area there were abrupt rathar than gradual changes. The exception is the historic period with the invasion of Europeans and eventual total displacement of the aboriginal way of life.

The primary changes in the adaptations of the populations in the Pensacola Bay area during the prehistoric period appear to have been in relationship to changes in the environment or technology and the consequent changes in food resources available to humans. The first shift was the change from the Pliestocene to the Holocene climatic conditions which is reflected in shift from the Paleo-Indian to Early Archaic way of life approximately 10,000 B.P. The second environmental event is the apprearance of marine food resources approximately 3,000-4,000 BP. This event is correlated with the shift in population out of the river valleys and into the lower bay areas during the Gulf Formational and Early Woodland Stages. During the Early and Middle Woodland periods, there appears to have been two developing processes which caused part of the population to shift back into the upper bays and river valleys. These were population increase and the development of the use of domestic plants. During Weeden Island and Fort Walton periods, there is a steady increase in sites occupied away from the coastal strip. This strip, however, continues to be used at ever-increasing densities. The Historic period is characterized by an initial decimation, probably from diseases spread through contact with expedition to Pensacola Bay and the DeSoto exploration of the South in 1540 and the DeLuna expedition to Pensacola Bay in 1599. Very few sites of this time period are known (less than 10), and most

native Americans were removed in the early 1700's. Other native American groups moved through this area in great numbers in flight from the European invaders.

METHODS AND PROCEDURES

Field work for this project was conducted in the Fall of 1984 on five Saturdays between September and November. The crew consisted of the Principal Investigator and four students enrolled in the directed study course "Archaeology on Santa Rosa Island." Each of the students had previous experience in both field and course work in anthropology/archaeology in the Pensacola Bay system.

The course was divided into three sections: (1) background research, (2) field work, and (3) report preparation. The background work was assigned to two students who researched the location of the previously recorded sites in the study area, located them on a USGS Quadragle map, and summarized the information known about them. This was presented to the group and the information was discussed along with the research design. During this stage, the sections of the final report were identified and assigned to the students. During the field work section of the project, the students researched their topics and prepared outlines for approval.

1. One student was assigned as responsible for each site.
2. The perimeter of the sites were located by placing flags at the limit of the surface scatter of material.
3. The site area was mapped using a transit and stadia rod or compass tape.
4. The site area was photographed and cultural material, if present, was photographed in situ.

5. Cultural material was identified, recorded and returned to the surface of the site.
6. Shovel tests, probes, and postholes were excavated on most sites to determine if subsurface material was present.
7. Field notes, photograph logs, and maps were kept by the site leader.

In addition, each student assigned to a site completed new Florida Master Site File Forms (Appendix A) and wrote the site summary.

SITE DESCRIPTIONS

A total of 13 sites were visited in this reconnaissance survey. These were all prehistoric shell middens, 10 of which were previously known and three of which were discovered during this study. It should be made clear that we did not survey any part of the island, rather we went directly to known sites and documented their condition. The following descriptions are summaries of current site conditions to be used for a quick reference, and Table 4 summarizes this information.

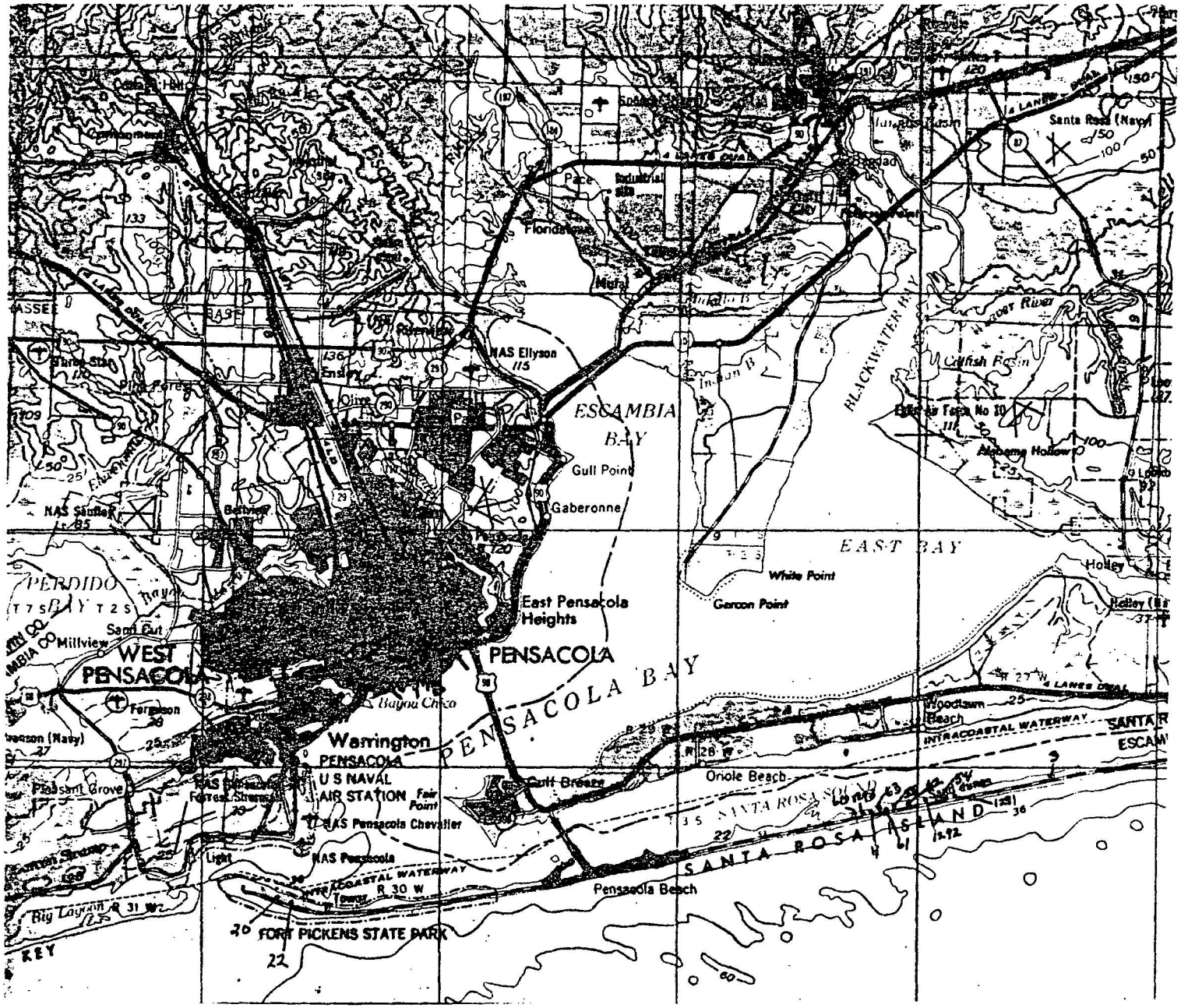
The locations of the archaeological sites are generally placed on Figure 7 for reference in the text. The detailed locations are continued in Appendix A to this report. The sites are accurately marked on U.S.G.S. Quadrangle Maps and full directions to each site are on the completed Florida Master Site File forms in Apendix A. This Appendix should be kept confidential and used for management purposes only.

8Es3 Five Miles West of Navarre

The site is located between two large dunes approximately 40 meters north of State Road 399 as stated in Tesar (1973). Low dunes immediately surround three shell areas and there is no evidence of the primary midden concentration as described by Tesar.

TABLE 4. SITE SUMMARY INFORMATION DATA

Site	Cultural Component	Cultural Material	Type of Shellfish	Depth	Integrity	Site Kind
8Es3	Santa Rosa/Swift Creek	sherds, shells	cockles,conchs, oyster	?	doubtful	shell areas
8Es4	Weeden Island II	sherds, shells	oyster, coquina, whelk,periwinkle, slipper, conch	1m	yes	scattered shell areas buried 60cm bs
8Es20	Weeden Island II Pensacola	sherds	none	?	no	?
8Es22	Pensacola Historic	sherds,shells, glass, brick,tile	oyster	20cm	yes	Spanish contact fortification
8Es54	Santa Rosa/Swift Creek Weeden Island	sherds, shells	oyster, conch, whelk	?	?	scattered shell areas different shellfish
8Es55	Weeden Island	sherds, shells, shell tools	oyster, conch	20cm	poss.	scattered shell area
8Es60	?	shells	scallop, cockle	surf.	poss.	scattered shell areas
8Es61	?	shells	scallop,cockle	?	poss.	thin scatter of shells
8Es62	?	shells	oyster	?	poss.	thin scatter of shells
8Es63	?	shells	oyster,scallop, cockle,mercenaria	70cm	yes	dense shell concentration
8Es1291	?	shells	cockle,sand dollar, conchs	?	poss.	scattered shell areas
8Es1292	?	shells	oyster,mercenaria	50cm	yes	thick shell midden areas
8Es1293	Santa Rosa/Swift Creek	shells	oyster,mercenaria	surf.	poss.	one large shell midden 3 smaller shell areas


ESCAMBIA BAY
EAST BAY
PENSACOLA BAY
PERDIDO BAY
WEST PENSACOLA
PENSACOLA
East Pensacola Heights
Warrington
Gull Point
Gaberonne
White Point
Garcon Point
Millview
Bayou Chico
Oriole Beach
Gulf Breeze
Pensacola Beach
SANTA ROSA ISLAND
INTRACOASTAL WATERWAY
FORT PICKENS STATE PARK
U S NAVAL AIR STATION
NAS Pensacola
NAS Ellyson
NAS Saufley
NAS Pensacola Chevalier
Pleasant Grove
Woodbine Beach
Holley
Santa Rosa (Navy)
Big Lagoon
Fair Point
Forest Stream
Blackwater River
Blackwater Bay
Escambia River

Area 1 on the site map (Figure 8) is the location of a large horse conch. Area 2 (Figure 9) is a 5 X 10 meter area of crown conchs (up to 8 cm long) and cockle shells. This area is near the center of the site and includes some burned shell. Area 3 is a concentration of only oyster about 2 X 6 meters in size. The oyster valves are generally flat and range from 5-7 cm in length.

The site seems to have been impacted by wind erosion and has been buried and exposed several times. No subsurface investigations were made and the depth of the shells is not known.

Tesar (1973) and Willey (1949) report Santa Rosa/Swift Creek to Weeden Island I components, however no sherds were present during this survey. No vandalism disturbances were seen. The information value of this site centers on Middle Woodland subsistence and settlement patterns.

8Es4 First Site Opposite Woodlawn

The directions in Tesar (1973) were used to locate the site and are still accurate. Initial surface survey located two small middens in blowout areas separated by a low dune ridge (Figure 10). These two areas are separated by a high dune and were designated north and south areas. The three foot high shell piles mentioned in Tesar (1973) are not evident at this time, but a dense oyster shell concentration approximately 1 meter thick and perched 1.5 m above the base of a high dune is eroding from the west side of the eastern dune in the southern area. This midden was not tested during the survey due to its unstable condition. Some of the sand was dark grey, and the black sand mentioned by Tesar (1973) was present in the northern site area where the shell was less thick.

Two shovel tests were excavated in the south area and two auger tests were placed in the north area. In the south area, a buried midden (20-30 cm thick) was present 60 cm below the surface. A dark humic zone was present

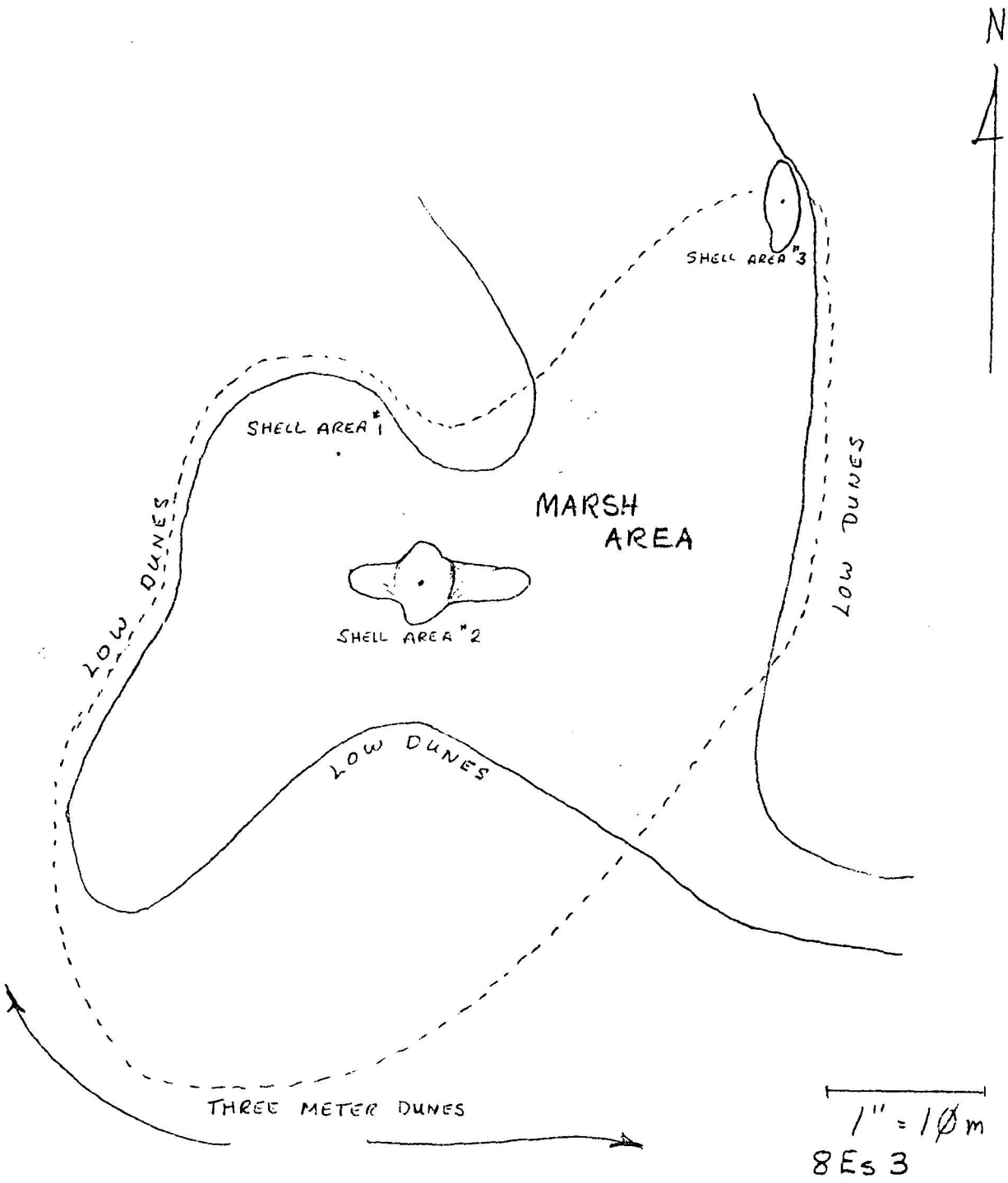


Figure 8. 8Es3 Site Map



Figure 9. 8Es3 Site Surface Showing Shell Area Number 3. Note low dune encircling exposed site and marsh to the north. View to north

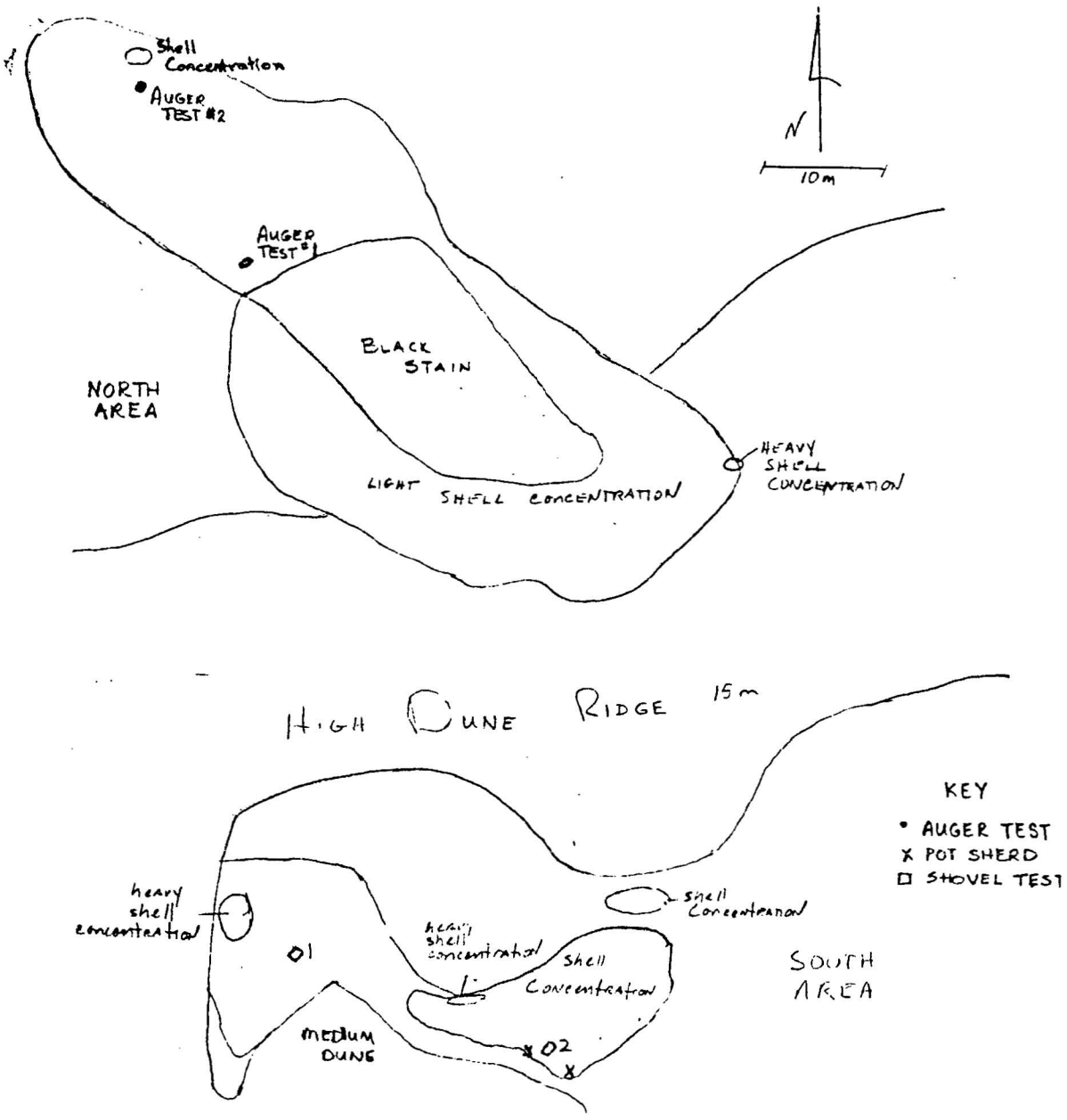


Figure 10. 8Es4 Site Map

immediately below the shell midden and extended to the water table. The buried midden is very dense and contains mainly oyster (5-12 cm long, with flat valves), some of which appear to have been burned. Other shells present were coquina clam, lighting whelk, periwinkle, scallop, slipper shell, and crown conch. The frequency of coquina increased with depth in shovel test 2 in the buried shell deposit. A radiocarbon sample was obtained from the shell deposit and a date of 940±70 BP (1010 AD) was determined (Beta: Number 11645). This would indicate occupation during the Late Woodland (Weeden Island) or Early Mississippian Stage.

There is no way to determine at this time if the deposits at 8Es4 are intact due to the activity of the dune building/blowout cycles. Changes in the dune areas occur seasonally, as well as from year to year.

Cultural material other than shell included two sand/grit tempered plain sherds and bone fragments, mostly fish, mixed with the shell in the buried shell deposit. A Weeden Island II component was reported by Tesar (1973) and Willey (1949), and the radiocarbon date agrees with this. The significance of this site lies primarily in presence of the buried shell deposit dated at 1010 AD and the seven surface shell deposits. These can address both subsistence and settlement patterns used on the island during the Late Woodland/Early Mississippian periods.

8Es20 Fort Pickens Number 1

During this survey the area east of the Battery Langdon picnic area and the western part of the Campground A loop were investigated to relocate this site. The area is well used by park visitors and has numerous foot trails, bike trails, paved roads, picnic/bar-b-que pits, and campsites. Water pipes have been installed and a new bath house has recently been built (Figure 11). The surface survey located cultural material only from the recent period. Due

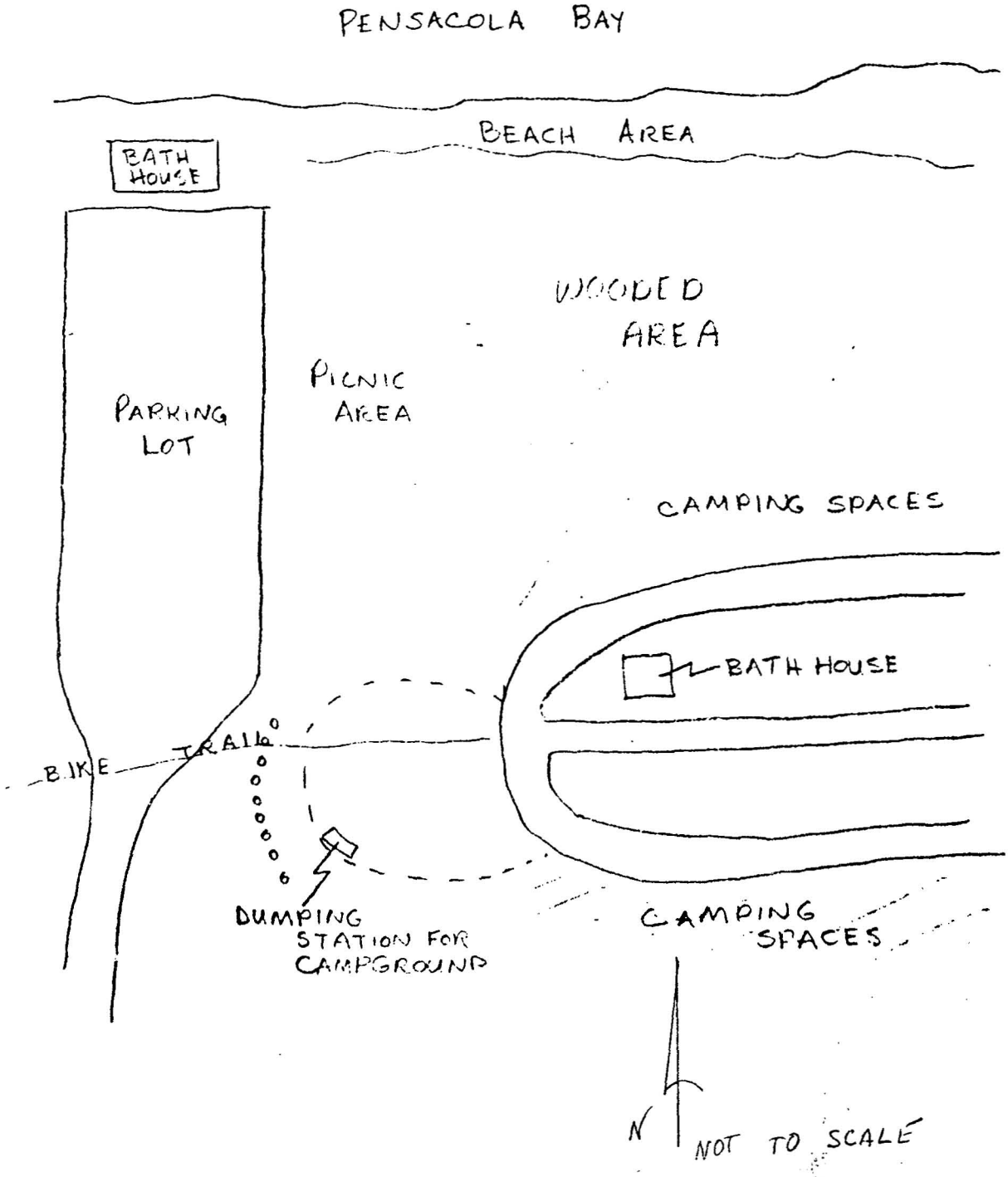


Figure 11. 8Es20 Site Map

to the landfill in 1959 from dredging activities in Pensacola Bay (Tesar 1793:107), and later park improvements, we concur with Tesar that the site must be destroyed or buried. No subsurface investigations were carried out during this survey in the area. If further construction is planned, subsurface investigations should be used to determine whether any part of the site still remains.

8Es22 Santa Rosa Pensacola (1722-52)

This important site is located in the vicinity of the Group Camping 2 area as described by Tesar (1973; 108-111). The area was occupied by the Spanish from 1722-1752 (Tesar 1973; 40-51) and the cultural material indicates European and aboriginal contact.

Cultural material is present in the northern part of the camping area (Figure 12) and east and west along the roadway which is built on a narrow gauge railroad bed now used as a shell road. Grit-tempered and sand-tempered Fort Walton series ceramics (Lake Jackson Plain) and shell-tempered Pensacola series ceramics were observed. Historic ceramics and glass typical of the 18th century were also noted. These include Majolica, El Morrow ware, olive jar, and porcelain. One pipe stem fragment was recovered which had a large diameter stem hole. Oyster shell fragments were noted throughout the area, however these could be recent.

The site description of Tesar (1973) is still generally accurate. The changes which should be noted are the improvements made in the area and the site deterioration due to recreational activities and camping. Primary deposits probably still do exist in the area, but with the extensive use of the facility, further deterioration can be expected and are adversely affecting the site. The most obvious impacts to the site which are occuring now include vehicle traffic in an area which is exposing many artifacts. In

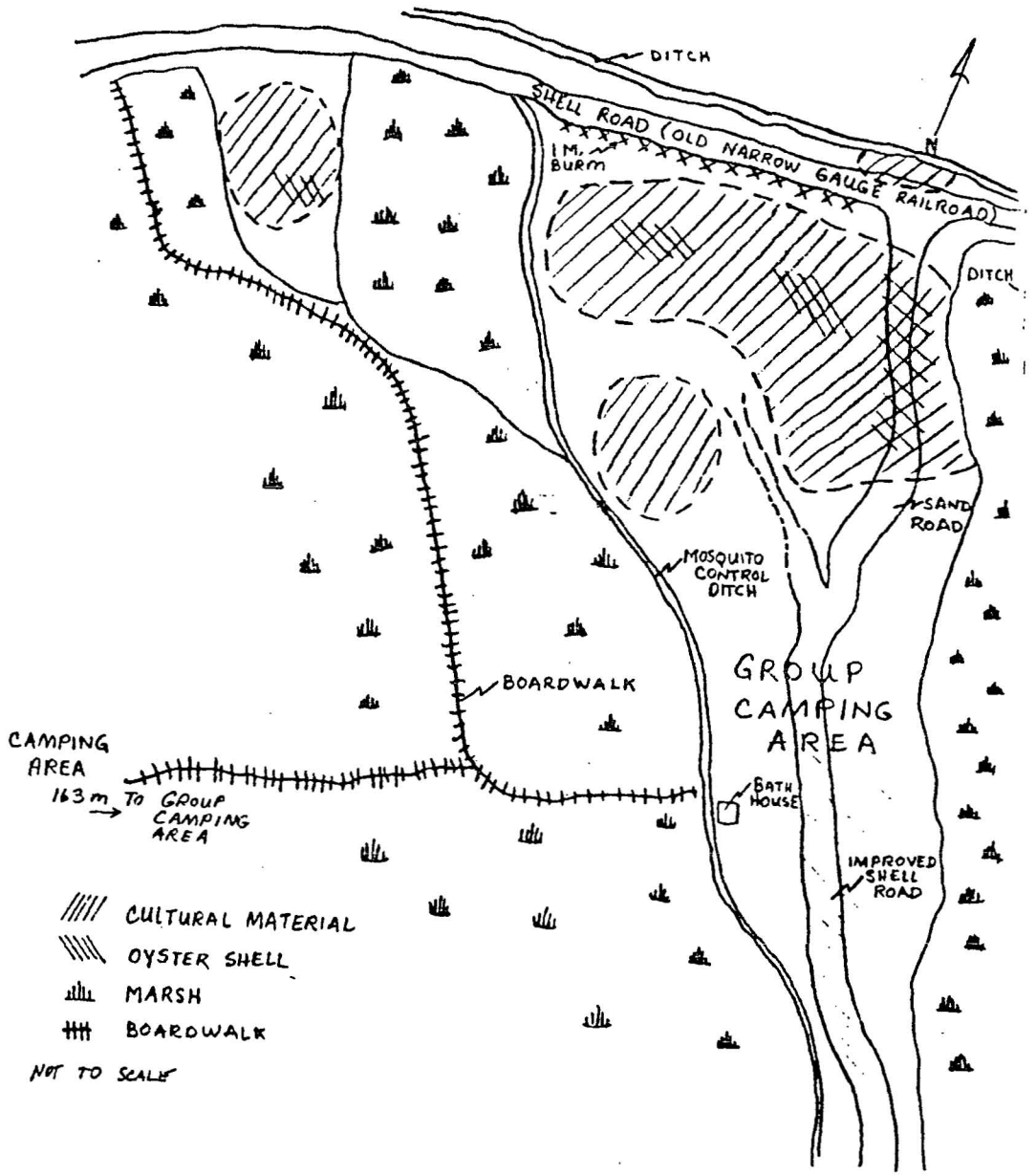


Figure 12. 8Es22 Site Map

addition, foot traffic is causing further deterioration. Shell fill is used in the area to stabilize the road through the campground and in some of the camp sites. Also added since the 1973 survey, is a boardwalk through the swamp just west of the site. This connects directly with the other camping areas increasing access to the site area. A restroom/bath house has been constructed in the southern part of the site, probably in the area of brick tile reported by Tesar (1973:109).

The integrity of the site is deteriorating in many areas, but there are likely intact deposits which could yield important information concerning contact period activities for the area. When ground disturbing activities are planned for this site, archaeological impact must be assessed. This is a highly significant site in this area's cultural history and is extremely fragile. It is most unfortunate that this significance has been ignored in the development of the camping area.

8Es54 Management Area No. 1 Midden Complex Site

The site is located among several high and low dunes, east and west of the present road to the garbage collection area for the Santa Rosa Management Area 1 (Figures 13 and 14). Eleven shell midden areas were originally identified, seven of which were eventually assigned to 8Es54, and four were organized into a new site: 8Es1291 (see site description below). Most of the middens are small (2-10 m in diameter) and located in blowout areas, however, one shell area is in a marsh currently under water. This is the largest midden complex located on the island measuring over 150 m in diameter.

The composition of the shell areas vary considerably. Shell areas 1 and 2 contain oyster only. Shell areas 3 and 10 contain small bivalves, and shell areas 8 and 9 contain large flat oyster valves (8-11 cm) and crown conch

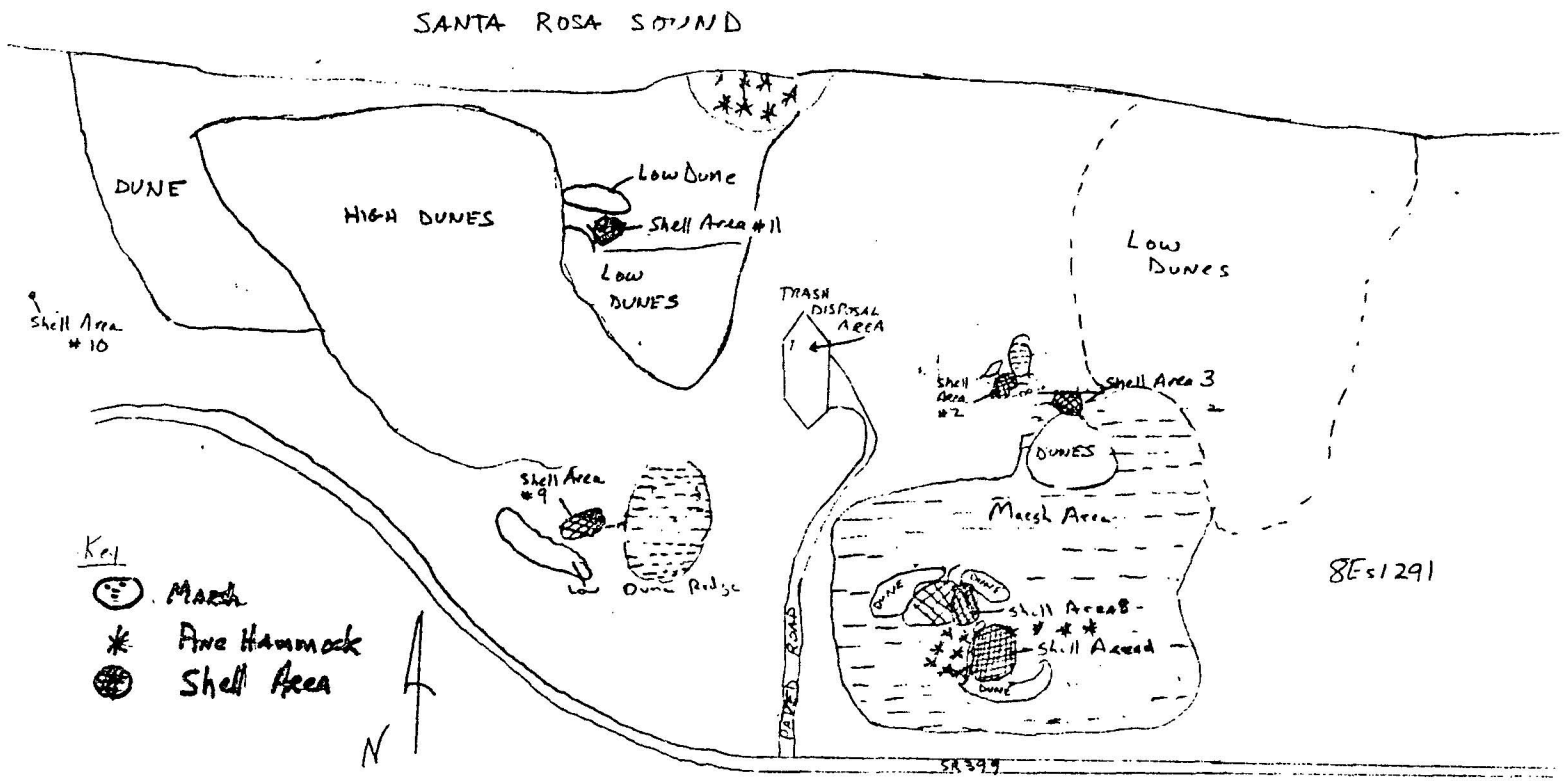


Figure 13. 8Es54 Site Map

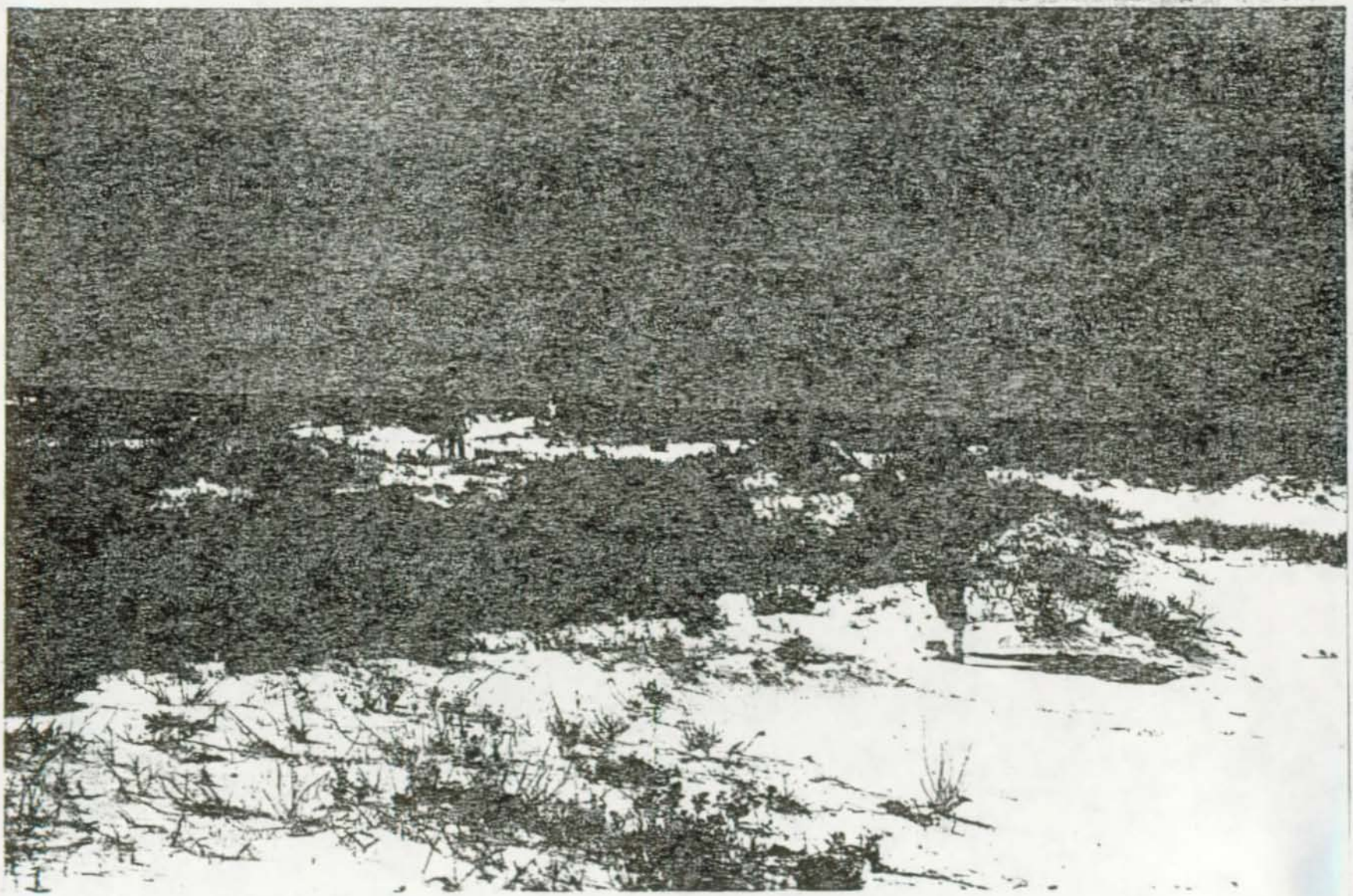


Figure 14. 8Es54 Site Surface in Vicinity of Shell Areas 1 and 8

shells. Shell area 11 also contains large, flat oyster valves (up to 8 cm) as well as horse conch or whelk shells. All shell deposits are light scatters with exception of areas 8 and 9.

The site as described by Tesar (1973) is still adequate, but there has been considerable new adverse impact due to the construction of the garbage dump area and the road leading to it, as well as recent picnic shelters. The increased number of people in the area due new picnic facilities is causing increased foot traffic and disturbance in many parts of the site.

Tesar (1973) reported Deptford, Santa Rosa/Swift Creek and Weeden Island I components. No cultural material, other than shell and modified shell, were observed during this survey, but a Woodland occupation can be assigned from the former collections. The significance of the site lies in the large size and the varied use of shell fish as evidenced in the shell areas. The site should be monitored closely and dune foot traffic halted to preserve the site, or it will continue to deteriorate unnecessarily.

8Es55 First Sturm Site

The site is located in a blowout surrounded by dunes 7 to 9m high. The north dune is topped with scrub oak and magnolias, and the dunes to the south are low (1 to 2m) and covered only with grasses. A National Park Service cement marker with "SR 24" and a 1973 date is located on the northeast edge of the site (Figure 15). This marker was probably located on a top of the dune, but has fallen and is now at the base. The area had one large shell deposit and two lighter scatters of shell visible at this time.

The large deposit contains very concentrated shell and is 30 cm thick underlain by a layer of dark sand. The shell deposit consists mainly of oyster (up to 10 cm long) and crown conch, some of which have been made into tools, especially bipoints. Four very small, sand-tempered plain sherds were

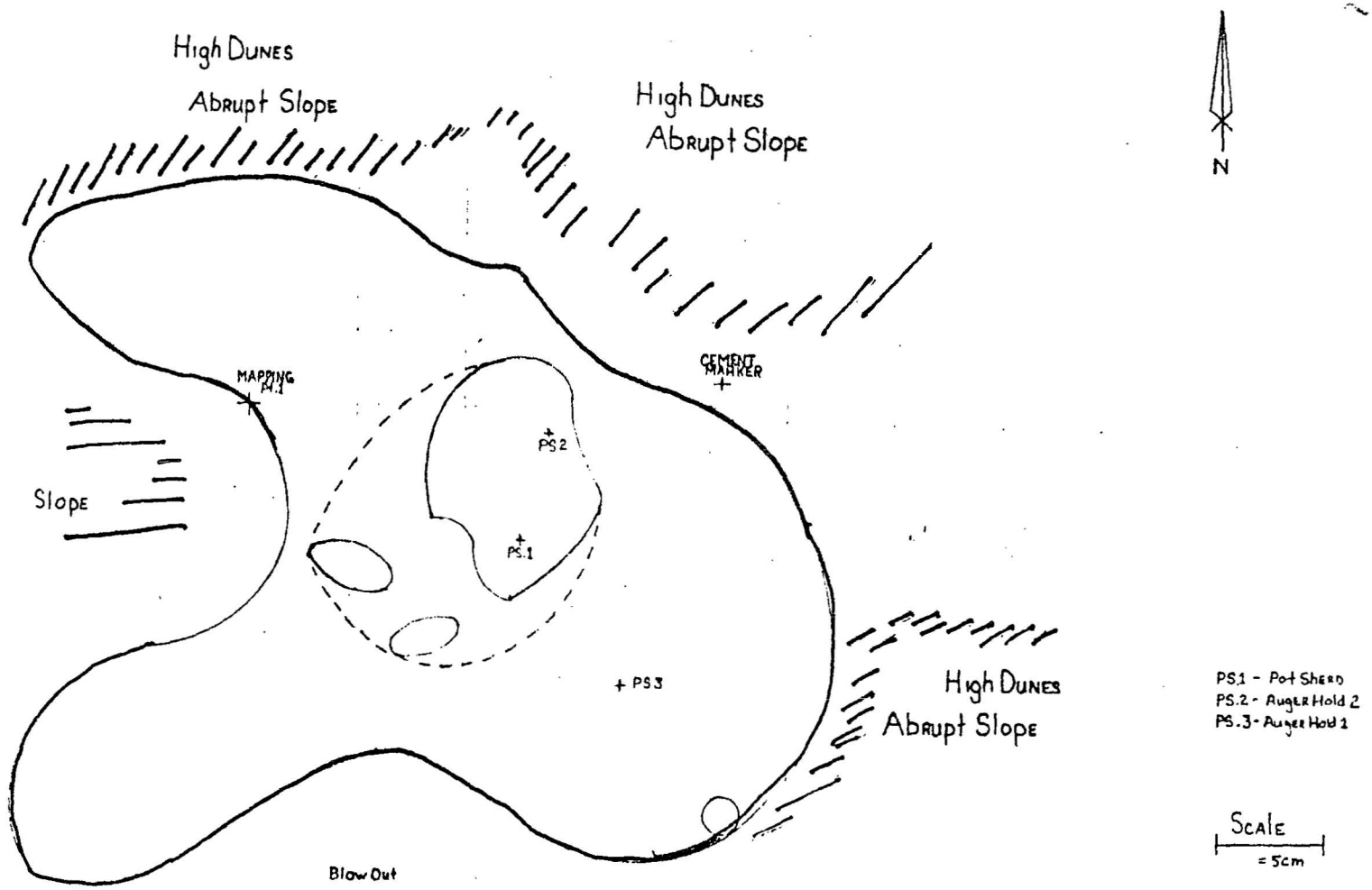


Figure 15. 8Es55 Site Map

noted in the primary shell midden. The two lightly scattered shell areas consist mainly of oyster and appear to be only surface scatters, as auger tests revealed no subsurface midden. None were noted in the light shell scatters. There were also .22 caliber shells scattered through the area.

The site description by Tesar (1973) was somewhat misleading due to the changes in the dunes in the site vicinity. The primary shell deposit, as reported by him, is no longer in the side of a dune, but is now a blowout area at the base of several dunes.

The cultural assignment to the Weeden Island period was confirmed by this survey with the observation of plain, sand-tempered, eroded sherds. These are likely associated with the Woodland, but could have been associated with a Mississippian occupation. This site is unusual due to the abundance of the shell tools (mainly from crown conch columnellas) and extraction holes seen in some of the gastropod shells.

The significance of this site lies in subsistence and settlement pattern information during the Late Woodland and Mississippian stages. The presence of shell columella bipoints and pottery is unusual and indicates much useful information is present.

8Es60 No Name Midden

This small site is located in a shallow blowout and is bordered on the west by a shallow ditch from the sound (Figure 16). Four very thin scatterings of shell were located and seem to be all that is left of the site. Scallop was the most frequent shellfish, but a few oyster and cockle shells were also present. All of the shells were fragments and in poor condition.

The description of the site is quite different from that of Tesar (1973) because the large dune described there has been heavily eroded and is quite low in some places. Part of the site may be buried, but this was not confirmed by this survey.

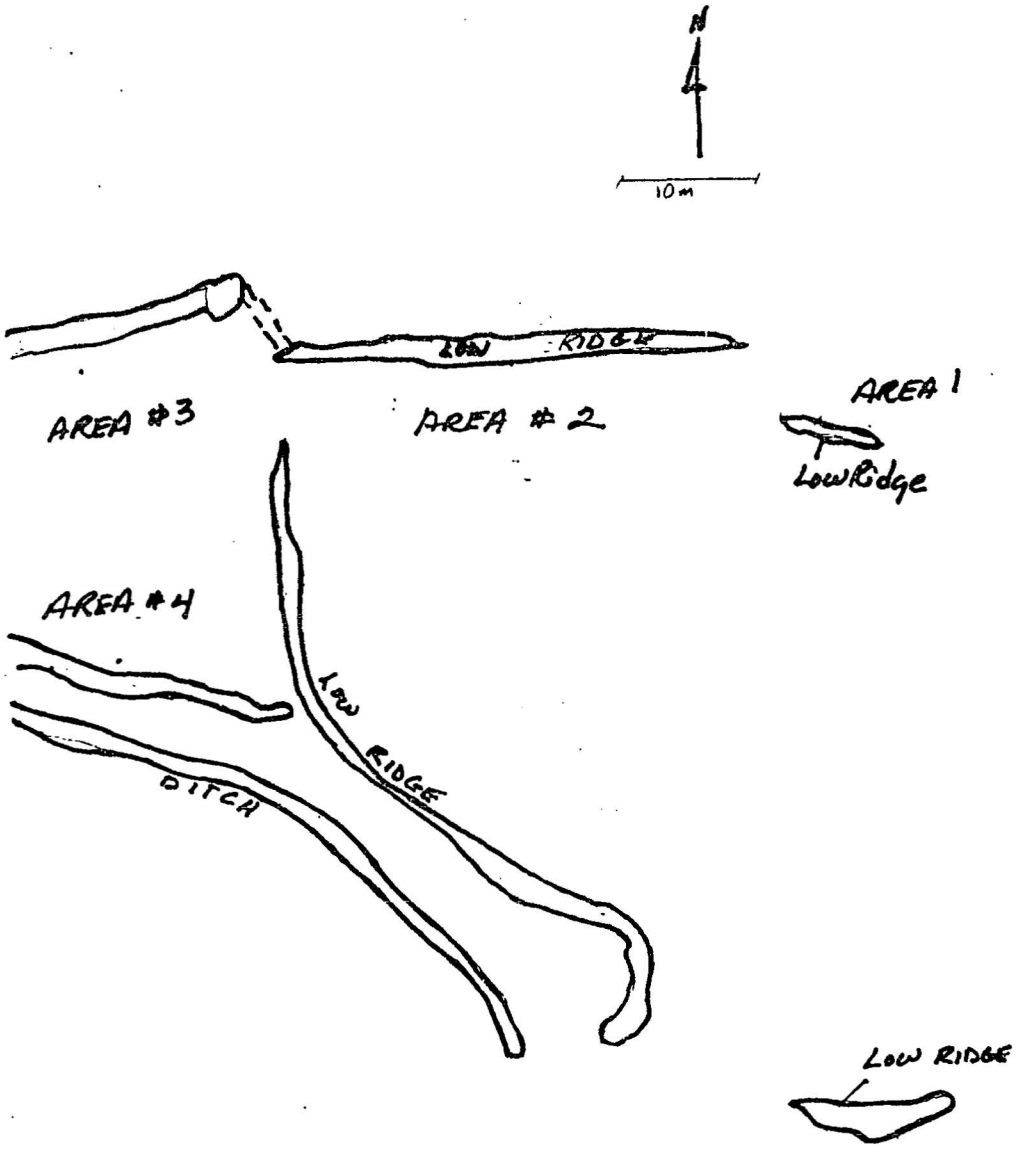


Figure 16. 8Es60 Site Map

The significance of this site is in subsistence and settlement patterns of the island. The presence of cockle shellfish is unusual and documents use of both Gulf and Sound resources.

8Es61 Hidden Midden

A surface survey was conducted in the vicinity of the site location as reported by Tesar (1973:142). Both sides of the mosquito control ditch disecting the site were searched, but only a few scattered cockle and scallop shells were observed. There was no evidence of a midden or any cultural material. None of the three shell concentrations identified by Tesar (1973:142) were located. This was a small site when described by Tesar in 1973 and lacked cultural material other than shell. The conclusion to be made from this survey is that the site is either buried or destroyed.

8Es62 Bomb Site North Midden

The site is located in a blowout between two dune ridges. This area has occassional standing water, but none was present at the time of the survey. The sand in the blowout was darker than in the surrounding area which could be due to the intermittend standing waters. The dune ridges to the north around the blowout were covered with stunted magnolias, scrub oaks, and palmetto. Sea oats covered the dune ridges to the south.

Cultural material included two aboriginal grit- tempered plain sherds and a shell fragment located in the lowest, central part of the blowout. Approximately 60 meters east of the sherds, a "dummy" bomb used during World War II was located. Two auger tests were excavated and no subsurface midden or cultural material was located. The sand in the auger tests was a blackish grey, but this is very likely due to the organics from the standing water in the area. The site appears to be deflated and could be partly buried. There was no oyster shell midden as described in Tesar (1973:142).

The cultural material recovered documents a Woodland or Mississippian occupation. The bomb was from the World War II time period. The significance of this site lies in the lack of shellfish remains and the relationship with other sites of this time period on the island from this period.

8Es63 Young Site

This site is located on the north shore along Santa Rosa Sound in a hammock depression containing a hammock of oaks, magnolias, and a few cedars. The hammock is bordered on the north by a marshy area and new advancing dunes which are already 3 to 4 meters high on the west, south and east (Figures 17 and 18). The limits of the site were not fully identified at this time, but it was documented that cultural material is present under the encroaching dunes on the south. The trees in the depression are 1 to 1.5 meters high. A low sand ridge borders the south edge of the hammock at the foot of the new dunes and follows the base to the north gradually dropping in elevation into the marsh area.

The main exposed shell concentration at this site is visible is designated as Area 1 on the northern edge of the site at the edge of the oak hammock. It is 6 X 2 meters in size and appears to be at least 15 cm deep. The concentration of oyster shells is dense with small amounts of gray sand-matrix. Part of this shell midden is buried 10-20 cm below surface by the oak hammock. It is covered by leaves, humus and grey sand. The buried midden area appears to be at least 30-40 X 10-15 meters in size.

A second exposure of shell (Area 2) is north and west of Area 1 along the edge of the same oak hammock. It contains scattered oyster shells less dense than Area 1 that extends into the wet marsh sediments. The size of this deposit was not determined.

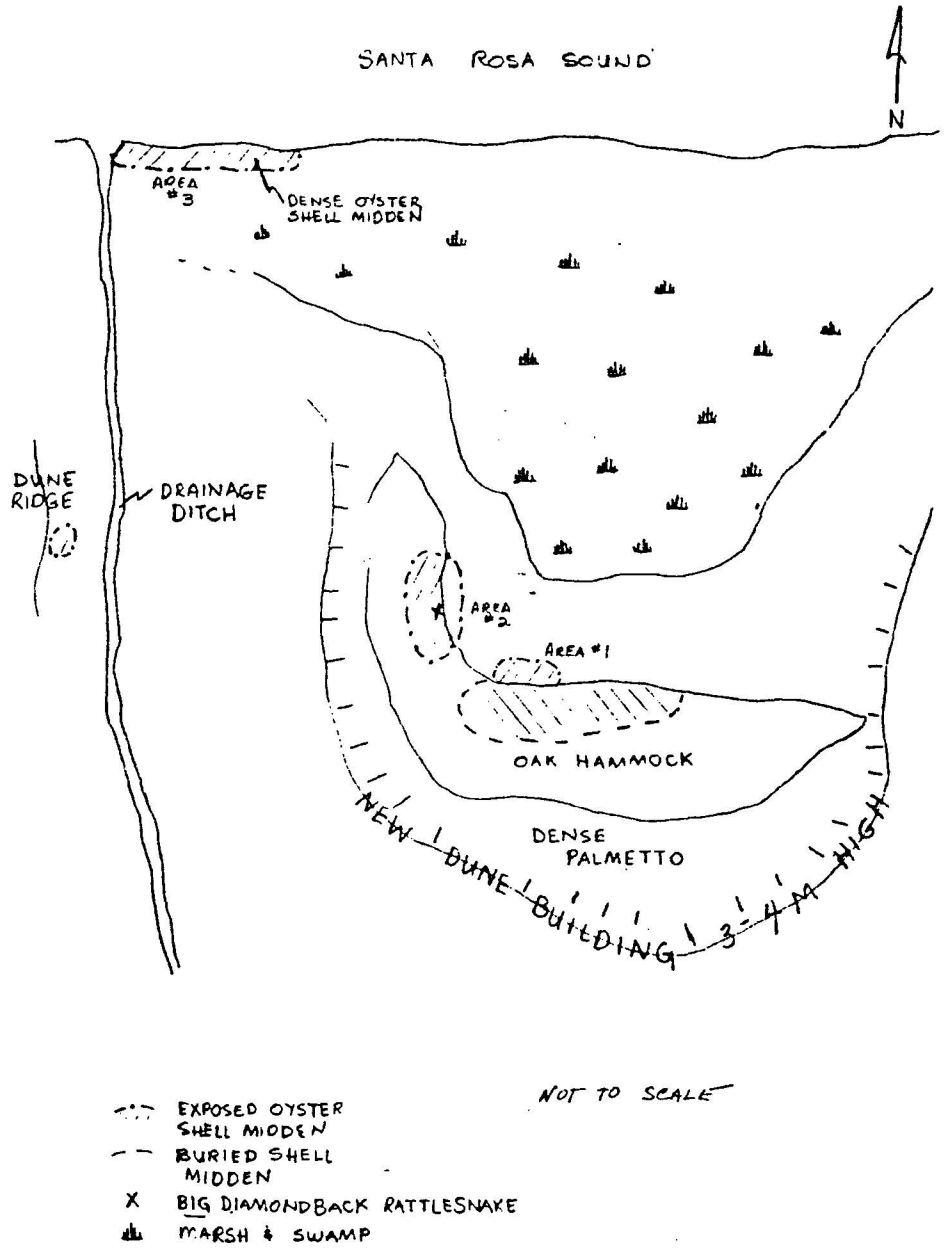


Figure 17. 8Es63 Site Map

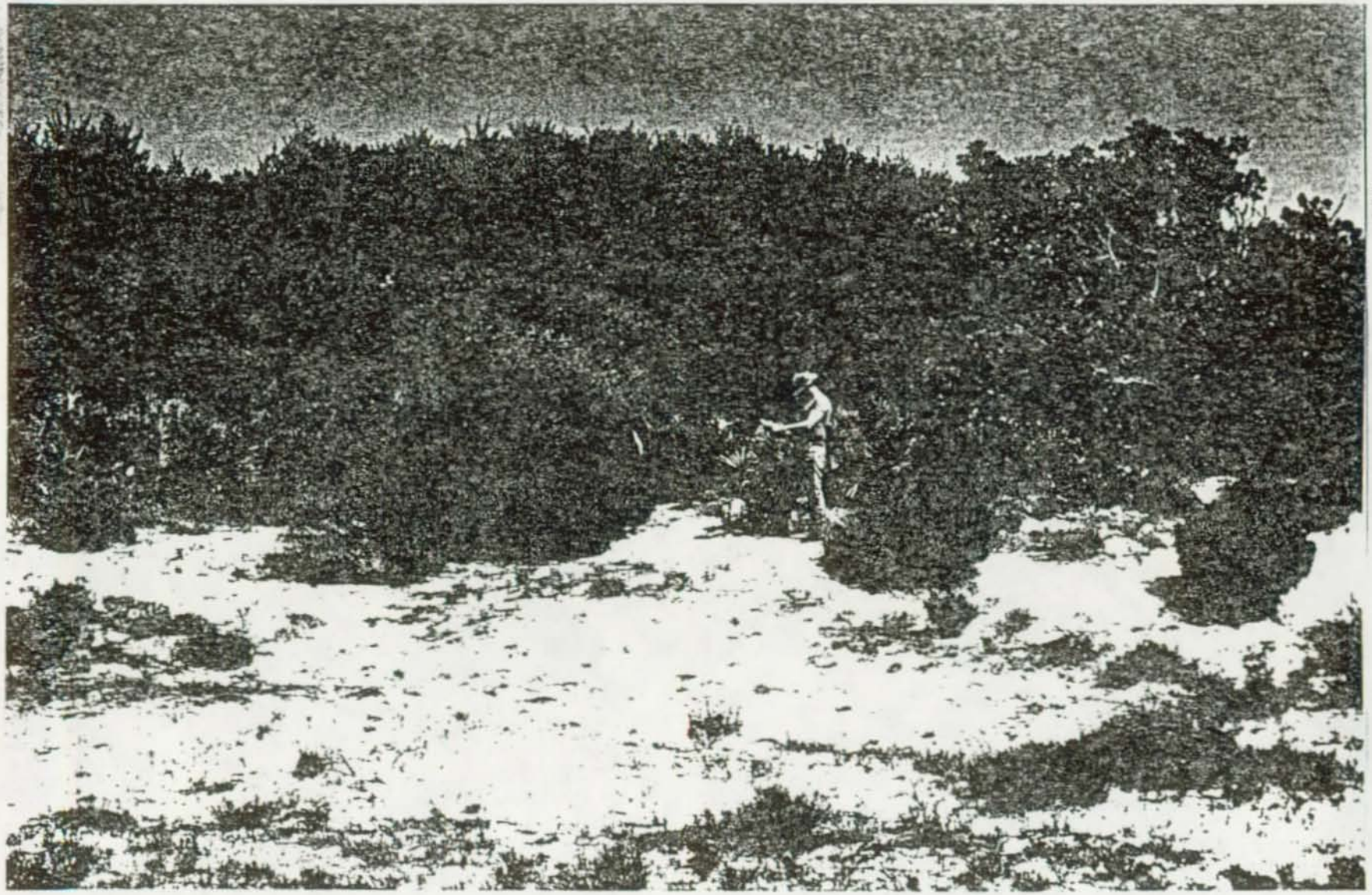


Figure 18. 8Es63 View of Site Area and Oak hammock

A third shell deposit (Area 3) lies along the shore of Santa Rosa Sound approximately 80 m northwest of the oak hammock and is densely packed primarily with oyster shell, but a few Mercenaria, cockle and scallop are present. The exposed shell extends about 35 meters east from the point where the drainage ditch enters the sound. No sherds were located and there is no way to determine the cultural affiliation at this time.

Tesar's description of the shell middens in the oak hammock is still accurate at this time, however, they are actively buried by the encroachment of the dunes from the south. There was no mention in the 1973 report of the dense shell midden along the sound shore.

The integrity of the shell middens, both in the oak hammock and along the sound, appears good at this time. Erosion of the beach is adversely impacting this portion of the site and burial by the new dunes is preserving other middens in the oak hammock. This site is highly significant due to the lack of deflation present in Areas 1 and 2. These could contain excellent information on site activities as well as subsistence and settlement pattern.

8Es1291 Pine Hammock Site

The site was separated from 8Es54 due to a definite separation by a 40m wide low dune ridge.

Four shell concentrations are present (numbered 4-7) (Figure 19). They are located east of a mosquito control ditch which drains to the south. The concentrations are scattered at the base of the low and high dunes. A few conch shells were noted in Areas 4 and 5. Area 4 also contained sand dollar fragments. Cockle shells were also noted in shell Area 7.

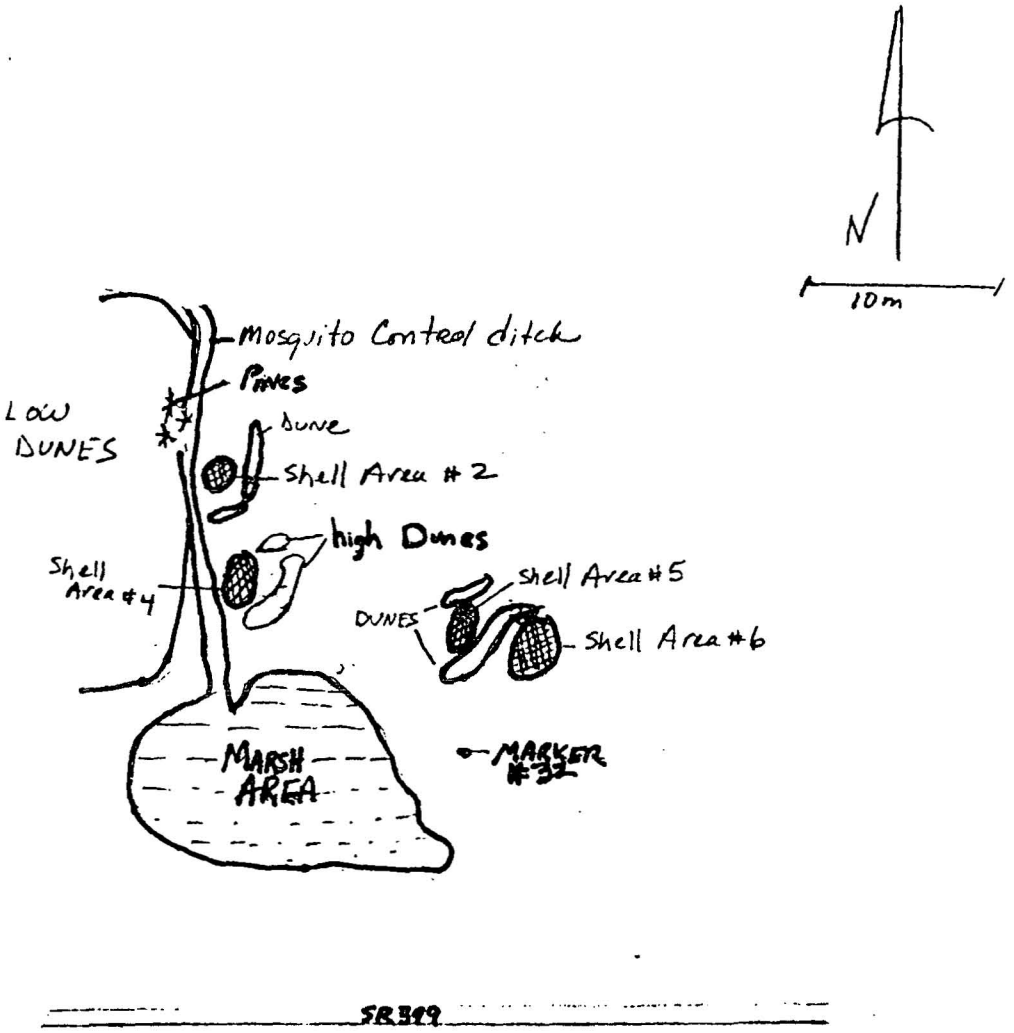


Figure 19. 8Es1291 Site Map

The subsurface depth of deposit was not determined. The shell scatters are light and likely very shallow. Adverse impacts to the site are wind erosion and trampling from people in the Santa Rosa Management Area 1 picnic facility. The significance of the site lies in its association with 8Es4, and the subsistence and settlement patterns used on the island.

8Es1292 Picnic Site

During the surface survey of the Santa Rosa Management Area 1, a densely packed shell midden was documented eroding into the sound just east of the sound picnic facility (Figure 20). Shells are also present in the water (Figure 21) along the side of the adjacent low dunes and in the marsh area adjacent on the south. Shells are also present in a blowout approximately 75 meters to the east.

The thick shell deposit is composed primarily of oyster (Figure 22), but there are Mercenaria concentrations scattered along the beach. Some of the concentrations of densely packed shell have been eroded into the surf. No cultural material other than shell was located during this survey, but it seems unlikely this densely packed shell area is recent fill. The time of deposition, however, has not been determined. Further testing would be necessary to document this.

The dense midden may be intact at this time, but deterioration due to natural forces and recreational activities is emminent. The lack of cultural material other than shell could possibly be a result of sherds being removed by people visiting the area. There is no indication of exactly how long the shell concentrations have been exposed, but they were not mentioned or discovered by Tesar in 1973.

The site will require further work to determine the cultural affiliation, but the density of the deposit (20-50 cm) and the high possibility that this site is still intact make this site very significant.

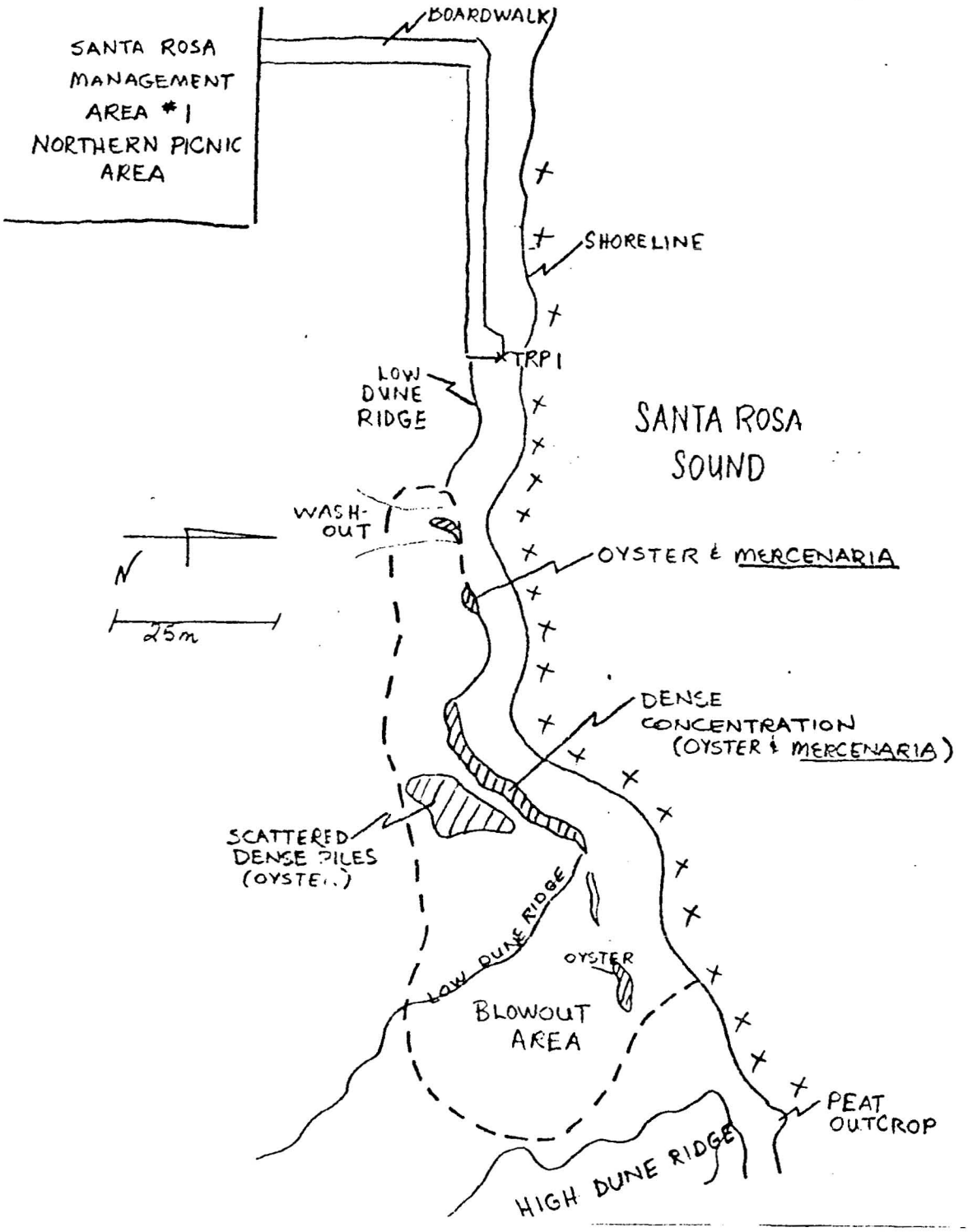


Figure 20. 8Es1292 Site Map

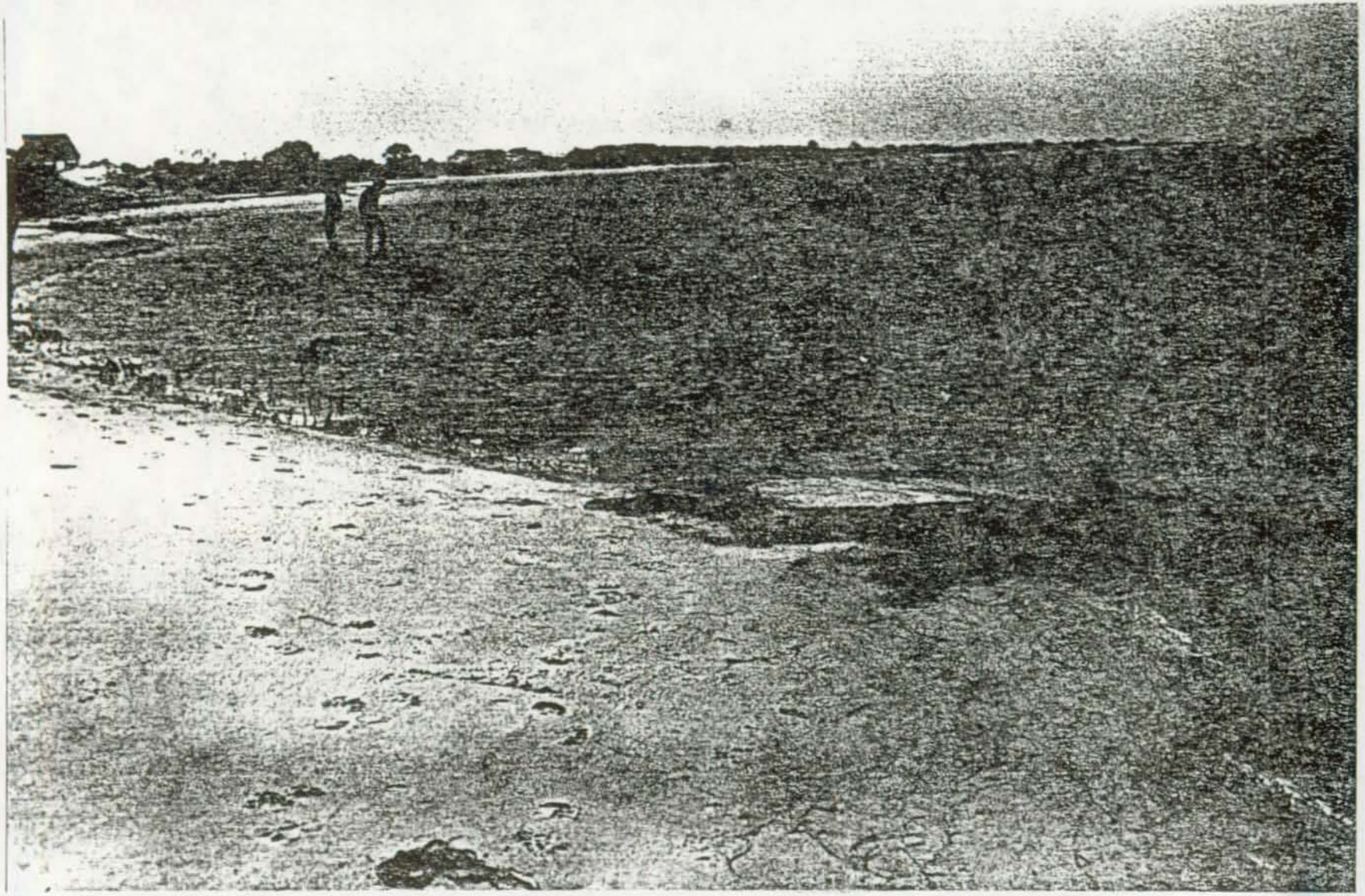


Figure 21. 8Es1292 View of Eroding Shoreline

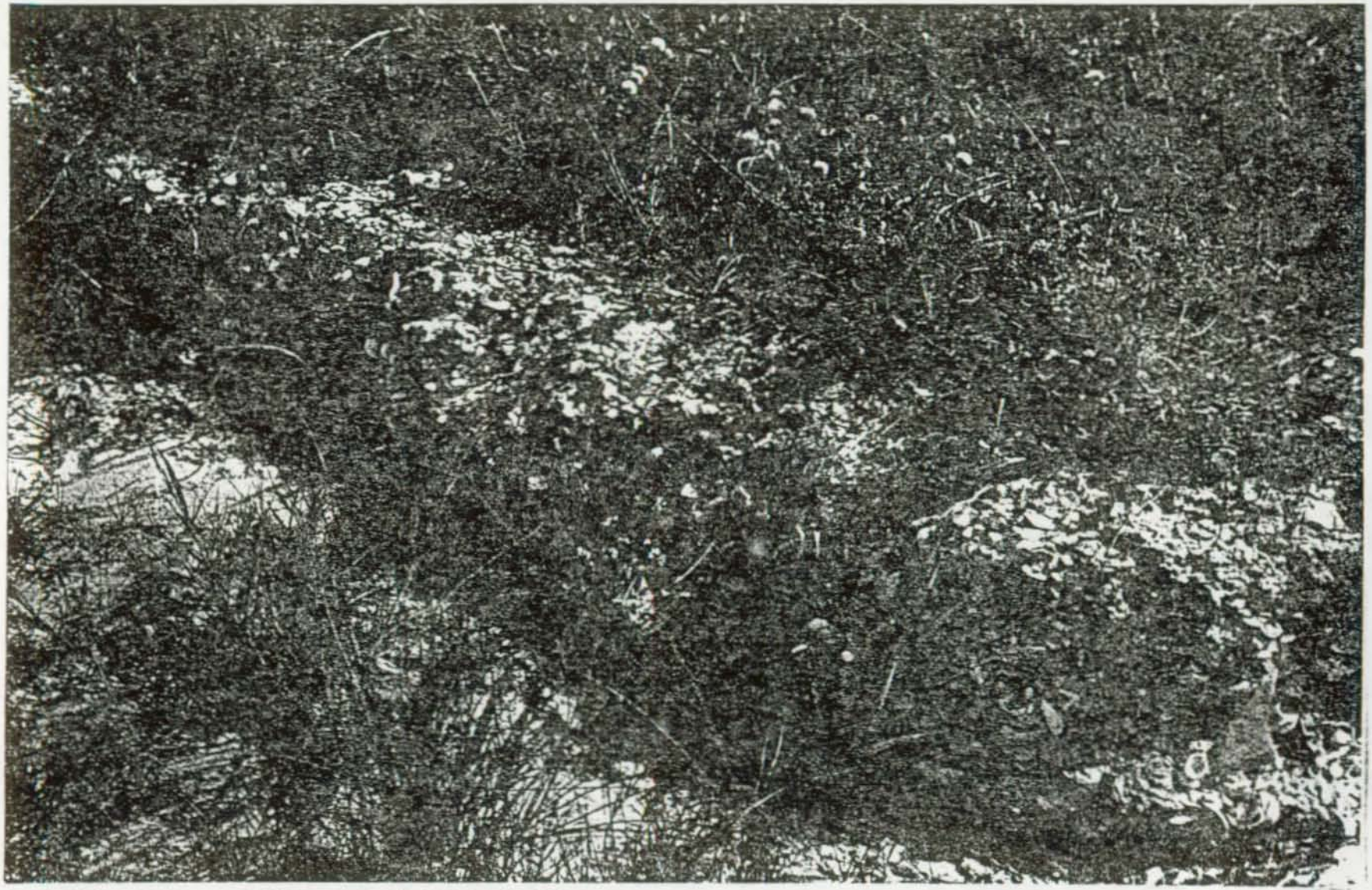


Figure 22. 8Es1292 Primary Shell Deposit

8Es1293 Big Clam Site

The site is located between a low dune ridge on the north and a high dune ridge with an abrupt slope to the south. The site consists of one large shell deposit and three other smaller shell scatters (Figure 23). The largest midden includes oysters and some of the largest Mercenaria found in the area (25-30 cm long). Shell tools are also present including bipointed crown conch columnellas. The smaller areas of scattered shell are primarily oyster with crown conch present in Area 4. Auger tests revealed no subsurface deposits of shell and it appears that material is limited to the surface.

One of the larger Mercenaria shells recovered from the primary midden was selected for a radiocarbon date. The sample (Beta Number 11645) dated to 1,380 ± 70 B.P. While no cultural material diagnostic of a particular cultural period was recovered, the radiocarbon date firmly places the harvesting of that clam and occupation of the site to the Middle Woodland Santa Rosa/Swift Creek period. The significance of this site is subsistence activities which are indicated by the harvesting of Quahog clams. This is unusual and indicates differential resource utilization on the island.

SUMMARY OF SITE DESCRIPTIONS

Thirteen sites were visited in this reconnaissance survey, and a summary of that information is presented in Table 4. The following information can be documented from these sites as a result of this and previous surveys:

1. Eleven sites were shell middens, and only one site (8Es62) did not have shellfish deposits.

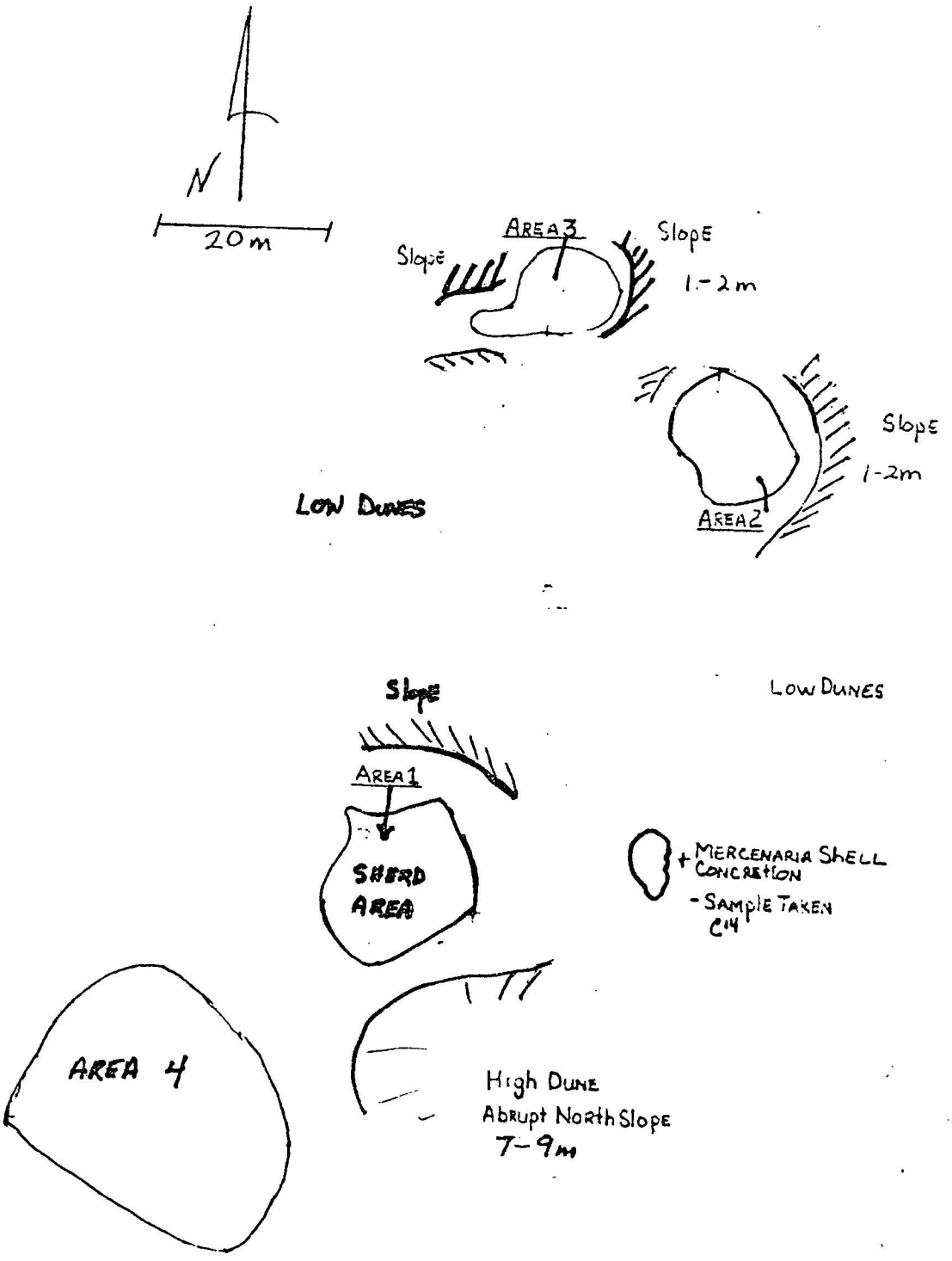


Figure 23. 8Es1293 Site Map

2. The cultural components were determined at seven sites:

   3 Santa Rosa/Swift Creek

   4 Weeden Island

   1 Pensacola

   1 Woodland or Mississippian

   1 Historic

3. Cultural material other than shell was rare at all sites except 8Es22
4. The shell fish remains are predominately oyster, however, there are shellfish remains at three sites which are from the Gulf surf zone (cockles, coquina, sand dollars, and periwinkle).
5. Remains of the quahog (Mercenaria) clam were observed at three sites.
6. Scallops were also observed at three sites, indicating a late summer occupation.
7. The depth of the deposits was not always determined, however, four sites had shell deposits ranging from 10 to 100 cm thick.
8. Four sites appear to have deposits which have not been disturbed.

This information on the island was used to exploit marine resources of the sound and the Gulf during the Middle Woodland through Historic Periods. The sites are not evenly distributed on the island. There were two main areas of site concentration: the 8Es54, 1291 and 1293 area and the 8Es4 and 1292 area. In between these areas, there appears to be a lack of sites. It should be noted that we did not survey the entire area, however this was indicated in Tesar's 1973 survey of the park property.

SUMMARY AND CONCLUSIONS

The purpose of this reconnaissance survey was to relocate all the previously recorded prehistoric sites in the Ft. Pickens and Santa Rosa areas of the Gulf Islands National Seashore. Ten sites which were recorded and had

not been revisited in at least 11 years were all revisited and reevaluated. An additional three new sites were identified during the course of this study.

The research design centered around two hypotheses drawn from our previous work in the Pensacola Bay system (Bense 1983). The hypotheses stated: (1) the island was used only during the Woodland, Mississippian and Historic periods in conjunction with marine resources utilization, and (2) the sites should be small and have a narrow range of tools and subsistence remains. The results of this survey confirmed both hypotheses. All sites were small and characterized by small individual areas of shellfish remains. Other cultural remains were sparce and limited to a few sherds and shell tools.

The distribution of the sites is clustered and probably reflects the repeated use of the same shellfish beds over long periods of time. The sites are usually located in or near protected areas such as hammocks or the base of high dunes.

Of the 13 sites, only four had integrity of deposition remaining today. The primary disturbance mechanism is wind erosion. Vehicle traffic (4 wheel drive) and trampling also are current destructive forces. It is difficult to determine the integrity of these sites, and it is possible they are intact and are the remains of short intermittent shellfishing episodes of different intensity. This is a real issue that must be considered when evaluating the sites on Santa Rosa Island.

RECOMMENDATIONS

From this small survey, we have realized that two major problems exist concerning the prehistoric archaeological sites on Santa Rosa Island: (1) site location and (2) site stability.

Site location is complicated due to the shifting of dunes causing sites to be buried. For example, site 8Es63 is rapidly being buried and if this process continues, much of it will not be visible in a few years. In addition, we observed several shell midden lenses in the middle of 8-10 m high exposed dune profiles. Had there not been a roadcut or blowout, they would never have been identified with the conventional survey methodology of surface observation and shovel tests. Therefore, the surveys that have been conducted on the island are definitely inadequate because the methodology was exclusively surface observation (Tesar 1973).

We recommend that the aboriginal archaeological resources on the GINS Santa Rosa Island areas should be identified and that the survey methods include:

1. Complete surface observation
2. Deep probing of all areas to the present water table (9-10 meters)
3. When the probe strikes shell deposits, a bucket auger should be used to sample them.
4. Random transects should be used in addition to testing all high probability areas.
5. The use of LORAN to identify site position. These readings can be taken with a portable land LORAN devise. This allows sites to be relocated in this area that is without stable landmarks.

The problem of the unstable land surfaces on Santa Rosa Island can be dealt with by two means: (1) the above described LORAN site location system, and (2) the close monitoring of vehicle and pedestrian traffic on the sites. The soft sand matrix in which these sites are contained is extremely vulnerable to any ground pressure. Even casual walking on the surface can severely harm site integrity.

The prehistoric aboriginal record on Santa Rosa Island is quite fragile and vulnerable to pervasive wind and water erosion. We do not understand well at all the use of this island by aboriginal peoples. Therefore, the National Park Service should comply with Executive Order 11593 and make complete inventory and evaluation of these unstable resources on this island.

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