



CALUSA NEWS

NEWSLETTER OF THE SOUTHWEST FLORIDA PROJECT

INSTITUTE OF ARCHAEOLOGY AND PALEOENVIRONMENTAL STUDIES

FLORIDA MUSEUM OF NATURAL HISTORY

NUMBER 7 • DECEMBER 1993

From out of the darkness comes Great Crane Spirit.



He moves gracefully past the chant-singers toward the plaza's crackling fire, his plumed head bobbing with each step.

At first he does not notice the several hundred people seated all about him. But now he stops, hops backward two steps, and abruptly straightens to his full height.

He is obviously disgusted at this worthless bunch of fisherfolk, and lets them know it. The crane's beak opens, his neck extends forward. Strutting haughtily about, Crane Spirit menaces the crowd.

The youngest boys and girls squeal and scramble over one another, desperate to escape his clutches. But the older children laugh along with their elders. They have seen this dance before, and they know it is make-believe.

Now First Ancestor steps forth from the opposite end of the plaza, singing a challenge to Great Crane Spirit, who stops pursuing the children and whirls to face her.

First Ancestor speaks...



Was this the way an origin myth was once played out among the Calusa at prehistoric Pineland, south-

Merals
1993

(continued on page 2)

From out of the darkness

(continued from page 1)

west Florida?

No one knows. The scene you have just read, and the Crane Spirit dancer pictured on the front page, are imaginary. But an intriguing artifact found at Pineland in 1971 demands that such scenarios be at least imagined, even if they can never be proved. The carved cypress artifact, about 10 $\frac{3}{4}$ " long, 2 $\frac{3}{8}$ " wide, and 2 $\frac{1}{4}$ " high, is known as the Thomasson figurehead, named for Phyllis and Ed Thomasson, who found it while walking near the Pineland Site Complex after a storm in 1971. Phyllis saw the end of the beak protruding from the muck and, wondering what it was, pulled it headlong from the muck.

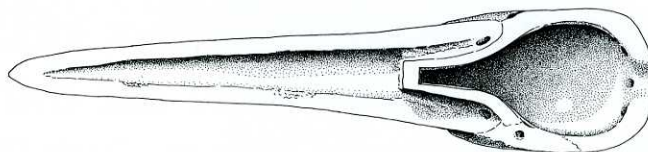
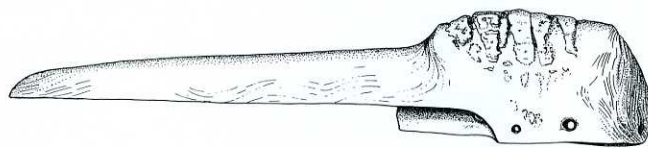
The Thomassons were stunned to see the finely carved and hollowed head and upper beak of a great bird, and immediately set to finding the lower beak. They spent much of the afternoon, but were unsuccessful. They kept the artifact in good condition for two decades and, in 1990, donated it to the Florida Museum of Natural History.

Though still in excellent shape when received, its once-waterlogged wood was now a dull gray, lightweight and fragile, and could not be further conserved. Wishing to study the figurehead in more detail, project artist Merald Clark decided to carve a replica, along with a lower beak to fit the upper one. He duplicated the find with care, including the nine drilled holes that may have functioned to tie the figurehead to a costume, or to manipulate the lower and upper beaks like a puppet.

The next step was extensive research. Were there other bird heads known in Native American and other societies around the world? How did they work? In what contexts were they used? Indeed, Merald found many examples. Such bird heads were used in a variety of contexts in such societies as those on the coasts of Washington State and British Columbia. These were also fishing peoples with rich artistic traditions.

Stimulated by the carved bird images he had learned about, Merald returned to his replica, attached strings to it, figured how to open and close the beak by pulling the strings, and began to draw sketches of how the figurehead might be used. Maybe it was part of a hat. Perhaps it was used as an extension of the arm, like a hand puppet. Or maybe it stood alone, like a part of a totem pole.

We may never know the truth about the bird head that Phyllis Thomasson spied in the muck over twenty years ago. But now there is new reason for optimism. The Pineland site yielded wood chips and cordage in excellent preservation in our 1992 excavations (see page 4). With adequate funds, careful excavation, and today's knowledge of wet wood conservation techniques, more such remains will be found. When they are, we might finally begin to comprehend something of the spiritual world of the Calusa Indians.



About the Cover

Artist Merald Clark employed a healthy dose of conjecture to bring the masked crane dancer to life and to provide a believable method of operating the mechanical figurehead. Here, Merald imagined that two toggles, hanging at the waist and connected to the figurehead by way of cords passing through the tall panel, permitted two operations. By pulling one toggle, the dancer clacked the beak shut and, with the other, pulled the neck up against the backing panel. When the toggles were released, as when imitating a crane's wing display, the beak opened and the neck stretched forward.

The Logic of Replication

Merald Clark isn't the only person making replicas of southwest Florida artifacts for research purposes. Jack Gaddy has worked shells and bones into both known and imaginary tool forms. Bob Edic has made fishing leisters and whelk shell tools and experimented with them in Charlotte Harbor. Chuck Blanchard has caught fish using the columellas of small conchs. Bill Payne has used native fibers to make a variety of cordage. Dick Workman has manufactured and used tool replicas, from shell axes to conch trumpets. David Meo has shared his knowledge of native crafts with scores of southwest Florida adults and children. Robin Brown has replicated all manner of prehistoric tools and other items for his forthcoming book (*Florida's First People*, Pineapple Press, 1994).

Making replicas of artifacts can be very useful to the archaeologist. It can help eliminate incorrect theories about how artifacts were used. For example, suppose we think that a certain kind of shell tool was used to chop wood. We can make a replica, then use the replica to chop wood. If it shatters, or isn't effective, then we begin to doubt that the artifact worked as we thought it did.

If the replica does chop wood pretty well, we gain some confidence in our wood-chopping theory. And if our replica begins to show signs of wear in just the same places as the Calusa artifacts, then we feel that we're really on the right track.

But does this *prove* that the Calusa people used the tool exactly the way we are using it? No. It adds credibility to our interpretation, but replication can never actually prove that people of the past made or used an artifact in exactly the way we do with our replicas.

By making a replica of the bird head, including the speculative lower beak, Merald Clark was able to show how strings pulled through certain drilled holes can make the lower beak snap shut. This suggests, though it does not prove, that the figurehead was intended to move in imitation of an actual bird. But without more information on the figurehead's context (other items found with it), we will never be able to decide which of Merald's imaginary scenarios, if any, is the right one.



CALUSA NEWS

Editor:

Dr. William
Marquardt,
Project Director

Writers:

William Marquardt
Karen Walker
Merald Clark
Dale Hutchinson

Designer:

Bob Bird

Produced by:

News and Public
Affairs,
University of Florida

For more information, write
Southwest Florida Project, Florida
Museum of Natural History, Univer-
sity of Florida, Gainesville, Florida
32611-2035.

What can I read?

Here is a list of some books about south Florida archaeology and Indians. Look for them at your library, or order them from the publishers or your bookseller.

Gilliland, Marion S.

1988 *Key Marco's Buried Treasure: Archaeology and Adventure in the Nineteenth Century*. University Presses of Florida, Gainesville. \$26.95.

Dickinson, Jonathan

1985 *Jonathan Dickinson's Journal*. Florida Classics Library, Port Salerno, Florida. \$6.95.

Hann, John

1991 *Missions to the Calusa*. Introduction by W. H. Marquardt, translation by J. H. Hann. University Presses of Florida, Gainesville. \$49.95.

Cushing, Frank Hamilton

1973 *Exploration of Ancient Key Dweller Remains on the Gulf Coast of Florida*. Reprinted from the 1897 edition. AMS Press, Inc., New York. \$22.00.

Kozuch, Laura

1993 *Sharks and Shark Products In Prehistoric South Florida*. Monograph 2, University of Florida, Institute of Archaeology and Paleoenvironmental Studies, Gainesville. \$5.00.

Marquardt, William H. (editor)

1992 *Culture and Environment in the Domain of the Calusa*. Monograph 1, University of Florida, Institute of Archaeology and Paleoenvironmental Studies, Gainesville. \$25.00.

McGoun, William

1993 *Prehistoric Peoples of South Florida*. The University of Alabama Press, Tuscaloosa. \$19.95.

Perry, I. Mac

1993 *Indian Mounds You Can Visit*. Great Outdoors Publishing Company, St. Petersburg. \$12.95.

Cavanagh, Helen

1993 *Panther Glade*. Books for Young Readers, Simon & Schuster, New York. \$15.00. (recommended for ages 10 to 14)

THE DISCOVERY OF PINELAND'S FIRST 1,500 YEARS



By Karen J. Walker and
William H. Marquardt

Pineland's imposing mounds, famous canal, and hidden, now-buried middens continue to be a focus of scientific and public interest. The Florida Museum of Natural History's 1992 field season began with a February gathering of scientists and veteran volunteers who launched a broad study of Pineland's village complex. We opened to the general public on March 4, welcoming volunteers, visitors, teachers, and busloads of Lee County's schoolchildren for the remainder of the season, well into May. By the end of the field season, more than 25,000 volunteer hours had been logged, more than 5,000 school children had had a direct encounter with archaeology, and more than 600 teachers had received special training.

Researchers "reconstruct" prehistoric Pineland. Archaeologists sometimes say they want to "reconstruct" a prehistoric site and its environment. But they don't mean this literally — they don't intend actually to rebuild the shell middens and houses of past inhabitants. What they mean is that they want to construct an imaginary model of the site's appearance at certain specific times in the past.

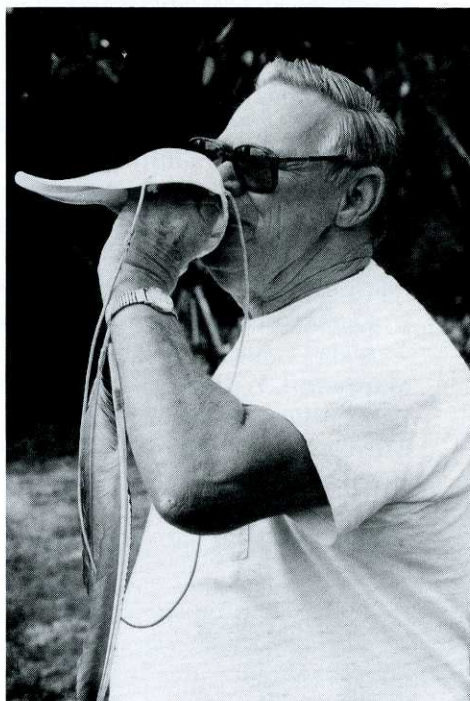
It begins with a map. Throughout the 1992 season, Corbett Torrence surveyed the many contours of the site and, with volunteer help, completed the work needed to make a computerized topographic map of Pineland as it exists today. Once in the computer, the map image can be manipulated to redraw itself

from different perspectives. A second objective is to "map" Pineland as it appeared during Frank Hamilton Cushing's 1895 visit. To this end, Corbett and Bob Edic interviewed Edward "Ted" Smith, a life-long resident of Pineland who witnessed many 20th-century modifications to the Pineland archaeological site. Mr. Smith has helped us understand what has happened to the site since Cushing's visit.

The ultimate goal of these activities is to create several maps that show Pineland as it appeared at different times in prehistory. Carol Godwin's work is essential

to this task. Assisted by stalwart volunteers, Carol sampled the Pineland Site Complex with two kinds of soil augers to collect midden and other sediment samples. This work defines the extent of Pineland's below-ground archaeological deposits. One important finding is that a buried midden occurs over a large portion of the low-lying areas of Pineland. The Soil Conservation Service's ground-penetrating radar survey conducted by Doug Lewis confirmed the extent of the midden.

Pineland contributes to modern issues of sea level change. During the 1990 season, a number of features at Pineland had suggested to us that sea level had fluctuated above and below the present level during the time Native Americans had lived there. We returned to Pineland in 1992 armed with new ideas about fluctuating sea-levels for Charlotte Harbor and the Gulf of Mexico. Geologists Frank Stapor and Rhodes Fairbridge visited Pineland to collaborate with our research team, and were impressed by the evidence. Two middens, one produced during A.D. 100 to 300, the other during A.D. 500 to 700, are today inundated by water at the lowest levels of the site. These materials were deposited on dry land, so the sea level must have been lower during those times. There are suggestions that in between the two low stands, Pineland



On March 4, 1992, Jack Gaddy blew the conch trumpet, officially opening the second "Year of the Indian" field season at Pineland. (Photo by D. Nelson.)

(Top of page) Excavations at Operation A (left) at the "Old Mound" at Pineland were assisted by a horizontal dewatering system and a "mud hog" pump. At right, a large group of volunteers gathers around the water screens. (Photo by K. Walker.)

was inundated by a higher-than-present water episode. The archaeological pattern at Pineland is corroborated by independent geological evidence from nearby barrier islands. If such fluctuations can be identified in prehistory and observed to be cyclical, then they also may be predictable.

Soil scientists help solve Pineland's puzzles. Soil scientists Howard Yamataki, Maxine Levin, and Willie Harris, along with our own Sylvia Scudder, have been studying Pineland's soils. They may have identified buried spodosols, indicating once-lower sea levels in Pine Island Sound. Sylvia's continuing work may also provide clues to the origin of the three sand mounds (Adams, Smith, Citrus) located at the site. One of these, the Smith Mound, was used for Weeden Island-related human burials during the Caloosahatchee II and later time periods.

Pineland's amazing waterlogged middens. To our great excitement, the 1992 excavation in the midden revealed very well preserved midden materials (prehistoric garbage) dating from A.D. 100 to 300. Anaerobic conditions promoted preservation of wood debris, fragments of twisted palm cordage, and many seeds including those of chili pepper, papaya, and an abundance of several types of wild gourds and squashes.

Lee Newsom says that the *Capsicum* (pepper) seeds are the first archaeological pepper seeds identified in the eastern U.S. The papaya seed is the first identified in North America, so far as she knows. With these new discoveries, along with the carved wooden bird head (see cover story), we now know that Pineland has preservation potential not seen in southwest Florida since the days of Cushing's famous Key Marco expedition.

An interesting sidelight of the waterlogged midden excavation is that we have an opportunity to examine the "preservability" of the various species of fish that should be expected in the middens based on present-day fish surveys. Bones of a number of abundant fishes in southwest Florida are virtually absent from previously studied dry faunal samples. The results from Susan deFrance's analysis of one fine-screened wet sample show little difference from dry shell midden



One of the important jobs done by volunteers at Pineland was washing and cataloguing artifacts. In this photo (left to right) are Patti Bartlett, Barbara Sumwalt, and Betty Anholt. (Photo by K. Walker.)

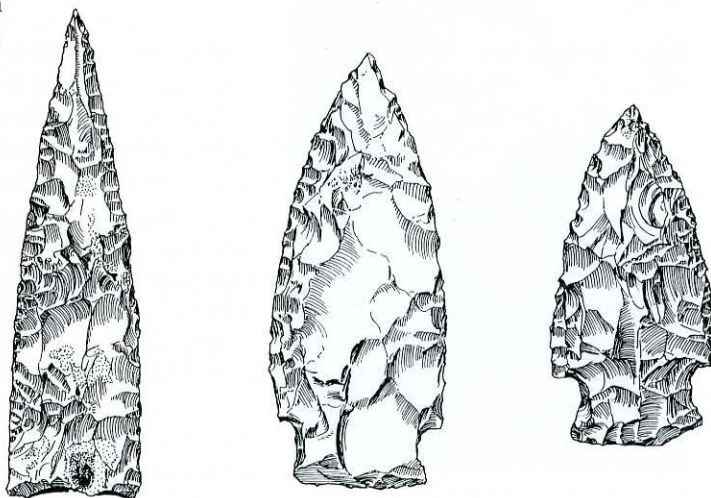
samples. We now think that the dry and wet shell midden samples are comparable for animal bone.

Did Pineland's residents always live the sedentary life? The Spaniards who visited southwest Florida in the sixteenth century wrote that the Calusa were settled in one place throughout the year, rather than migrating from place to place, and that they did not raise crops. But when did the Calusa or their predecessors first settle down?

Pineland offers us the opportunity to examine sedentism over a period of 1,500 years to help answer this question. The animal remains found in the middens, such as quahog clam shells, odostome shells, catfish otoliths, and the atlas bones of pinfish, grunt, and threadfin herring all occur in numbers large enough to allow Irv Quitmyer to "read" the particular animal's season of death. Using multiple data sources in this manner, he will infer whether Pineland's residents lived

year-round or on a seasonal basis at different times in the past.

Pineland research helps refine southwest Florida's pottery chronology. Ann Cordell's recently published research includes certain revisions of southwest Florida's pottery chronology. Her current work with the Pineland pottery continues to refine the sequence. For example, the first appearance of Belle Glade pottery is traditionally seen as a marker for the beginning of the Caloosahatchee II period, set at A.D. 700 by Randolph Widmer, at A.D. 650 by Ann. However, Belle Glade pottery was found at Pineland



Hafted bifaces found at the Pineland site, 1992. (Illustrated by Merald Clark.)



Laboratory work at the Florida Museum of Natural History finds Mark Allen (left) at work on archaeobotanical materials, Aaron Thornberg (center) sorting shells found in the auger survey, and Jenna Wallace sorting archaeobotanical samples from the waterlogged midden at Pineland. (Photo by K. Walker.)

Belle Glade pottery was found at Pineland dating to A.D. 500, suggesting an even earlier time for the beginning of Caloosahatchee II. In addition, the 1992 excavation of Pineland's waterlogged midden provides Ann with a Caloosahatchee I period sample of sherds to confirm or deny the absence of a particular variety of plain pottery (called Spiculate B) during this time period.

Pineland's shell artifacts contribute to chronology-building. Not until the Pineland excavations had there been a large sample of carefully collected shell artifacts from different time periods at one location. This means that these artifacts can be organized into time units, thus revealing how they changed (if they did) over the 1,500 years represented at Pineland. Rob Patton, who is analyzing

over 1,400 shell artifacts found at Pineland, believes that changes in shell tools may relate to increasing complexity among the Calusa. Rob's work will be incorporated into his M.A. thesis.

How far-reaching was the trade network of Pineland's residents? A single cube of galena no larger than a thimble provides a clue to the Calusa exchange network. Galena is lead ore, a dense mineral that naturally forms in cubes and when crushed appears as a silvery powder. Galena was used by various Native American people as magical charms or, in crushed form, as ceremonial powder and face paint.

During the 1992 season, volunteer excavator Kendra Pinsker discovered a galena cube in the remains of a Calusa structure dating to A.D. 1300 on one of Pineland's mounds. The mineral does not occur naturally anywhere in Florida, so we sent a tiny sample to Dr. Ronald Farquhar of the University of Toronto for source identification (using atomic absorption spectrophotometry). The result — Pineland's galena came all the way from southeastern Missouri!

What's Next? Many hours of laboratory analysis, comparative research, and writing are now in store for those working on the Pineland project. Thanks to grants from the National Endowment for

the Humanities, Florida Bureau of Historic Preservation, the Maple Hill Foundation, and the Ruth and Vernon Taylor Foundation, we can all look forward to learning a great deal about 1,500 years of prehistory at the Pineland Site Complex.



Kendra Pinsker is shown at work in Test Pit I, Pineland, 1992. Kendra reached a compact level with several postholes showing evidence of a structure. (Photo by B. Purdy.)



Pineland owners Don Randell (right) and Pat Randell (center) take an active interest in the excavations, as Corbett Torrence looks on. (Photo by K. Walker.)

Pineland Property To Become Research Center

Don and Pat Randell, faithful supporters of the Southwest Florida Project and owners of the Pineland Site Complex, have agreed to donate about 56 acres of their property to the University of Florida Foundation. The Florida Museum of Natural History would like to establish a research center for archaeology and education at Pineland. We want to name it the "Randell Archaeological Research Center."

In order to create a permanent research program at Pineland, we need to raise \$800,000 in private funds, to be matched by \$400,000 in state money. This will create an endowment fund that will pay for a permanent research director and a continuing program of research and education at Pineland. In addition to work at the Pineland site itself, which has proven ideal as a site for school visitation and public participation, Florida Museum research and education projects throughout southwest Florida will be conducted from the Pineland headquarters.

We owe a great debt of gratitude to the Randells, who have worked hard to see that the Pineland site is protected and studied. Their gift ensures the preservation of one of the nation's most important sites. When the endowment goal is reached, the gift will become even more important as a center for research and learning about southwest Florida's heritage and environment.

The Florida Archaeological Council recognized the Randells' many contributions to heritage preservation by presenting them a Stewards of Heritage Preservation award in St. Augustine on November 13, 1993.

IN BRIEF

By William H. Marquardt

EARLY DEPOSITS FOUND AT GALT ISLAND; DEVELOPMENT PROCEEDS

Development of 15 lots on archaeologically sensitive Galt Island is complete. Wooden walkways have been constructed to allow visitors to walk through the beautiful mangrove forests near the protected shell middens without disturbing the environment or the sites.

Part of the development plans called for the main roadway to pass over a low-lying mucky area. Following the recommendations of Bill Marquardt, developer William Mills paid for an archaeological investigation of the area to be filled in. The testing work was done by Piper Archaeology of St. Petersburg.

According to a report by Bob Austin and Al Woods, deposits were found well below the modern-day water table. Deposits dated as early as 2000 B.C. \pm 60 and as recent as A.D. 810 \pm 60. In the lower levels, thick sand-tempered pottery with rounded lips typical of the Caloosahatchee I period was found, along with shell and bone artifacts.

Zooarchaeological analysis by Susan deFrance revealed abundant remains of bony fish (mainly catfish, pinfish, and silver perch), sharks, snakes, and turtles; mammals were poorly represented.

The earliest date from our 1987 excavations on Galt Island was A.D. 340 \pm 60. The recent Piper excavations show that Galt has a much longer history than previously believed, and that it was occupied during the lower sea level episode documented at Cash Mound, Calusa Island, and other harbor sites.

Meanwhile, for her M.A. thesis research, Susan White has been doing a detailed analysis of the pottery we excavated at Galt Island in 1987. Her thesis will be completed in 1994.

HOG PLUM IS GOOD FOR YOU

Students of U.F. Professor Marty R. Marshall's Nutrition class analyzed some unusual food items for their class projects last year. Lee Newsom, Bill Marquardt, and Robin Brown provided Calusa "delicacies" of saw palmetto berries (*Serenoa repens*) and hog plums (*Ximenia americana*).

Most people who try ripe hog plums find them tasty, but few people can eat ripe palmetto berries with a smile. In 1696, En-

glishman Jonathan Dickinson described palmetto berries given him by south Florida Indians as tasting like "rotten cheese steeped in tobacco juice."

Whatever we may think of these foods, the Calusa and their neighbors ate lots of them. It turns out both are quite nutritious. The palmetto berries were 1.6% protein, 4.4% fat, 36.4% carbohydrate, and 55.0% moisture. The hog plums were 15.2% protein, 18.4% fat, 47.4% carbohydrate, and 17.4% moisture.

MOUND KEY MAPPING PROJECT FUNDED

The Bureau of Historic Preservation has granted \$26,077 to the Koreshan Unity Alliance to undertake mapping and preliminary testing at the Mound Key site in Estero Bay. Under the direction of Bill Marquardt, the work will be done by Corbett Torrence and Sam Chapman of the Florida Museum of Natural History's Southwest Florida Project beginning in December, with the assistance of volunteers and logistical help from the Koreshan State Historical Park. A color brochure about Mound Key will be prepared by Claudine Payne.

Mound Key is impressive, with several high mounds (some over 30 feet high), canals, and plaza-like features. The 125-acre island is thought by many to have been the capital of the Calusa kingdom when the Spanish arrived in 1566, yet no systematic professional research has ever been done there.

CALOOSAHATCHEE AREA TO BECOME NATIONAL HISTORICAL LANDMARK

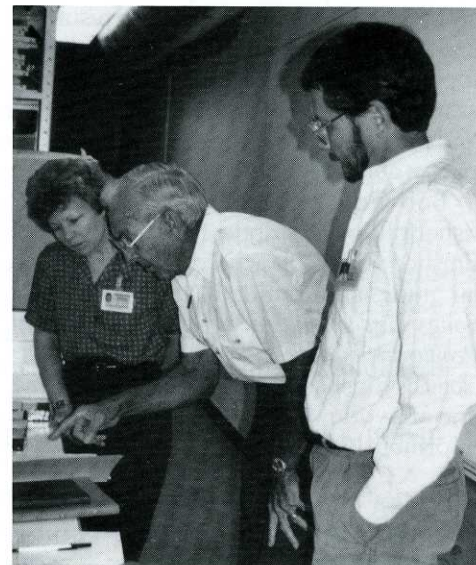
Karen Walker is working on a nomination of a number of sites in Charlotte Harbor for inclusion in a National Historical Landmark district. Included are the Pineland Site Complex, Mound Key, Big Mound Key, Useppa Island, and several others. She is working closely with Mark Barnes of the National Park Service. The nomination forms will be ready for submission in 1994.

MITCHELL HOPE DONATES REPUBLIC GROVES COLLECTION

One of the most important collections of engraved bone and other artifacts ever excavated in Florida was presented to the

Florida Museum of Natural History by Mitchell Hope on June 18, 1993, along with detailed excavation notes and photographs.

The site, which dates to the Archaic period, was discovered in 1968 when a dragline operator disturbed a human burial near an orange grove. Working with professional archaeologists and volunteers, Mitchell conducted a salvage excavation of the site, discovering artifacts of bone, antler, stone, wood, and cordage. The findings



Elise LeCompte-Baer (left) and Bill Marquardt (right) listen as Mitchell Hope discusses one of the donated artifacts from the Republic Groves site. (Photo by K. Walker.)

were published in *The Florida Anthropologist* in 1981. The artistry of the artifacts, especially some of the antler pieces, is remarkable, and the collection is a welcome addition to the South Florida research collections.

NEW GRANTS MEAN COMPLETION OF ANALYSIS, FOUR NEW PUBLICATIONS

After a two-year period of very meager funding, the Southwest Florida Project lab is again humming with activity, thanks to new grants from the National Endowment for the Humanities, the Florida Bureau of Historic Preservation, the Ruth and Vernon Taylor Foundation, and the Maple Hill Foundation.

Analysis of data from the 1989 Useppa Island excavations is nearing completion. A multi-authored monograph on the archaeology of Useppa Island is being as-

sembled by Bill Marquardt. It will include reviews of previous work, including the 1979-1980 research of Jerald Milanich and Jefferson Chapman, as well as our own preliminary tests in 1985. But the main section of the volume will report results of the 1989 excavations on "Calusa Ridge," written by Corbett Torrence. Ria Palov is working on a chapter describing the historic period occupation of the island by Cuban fisherfolk, based on historical research and on artifacts unearthed in our test excavations on Useppa Island in 1993.

A volume focused on the Pineland Site Complex will be assembled by Karen Walker and Bill Marquardt. The Pineland book will report on the 1990 and 1992 seasons at Pineland, present the results of archaeobotanical, zooarchaeological, soil, topographic, stratigraphic, and other research, and show how the site was built up and transformed following its initial occupation about A.D. 100.

Bob Edic's report on the historic fisherfolk of Charlotte Harbor is almost finished. Chuck Blanchard's book for popular audiences, entitled *New Words, Old Songs: Understanding the Lifeways of Ancient Peoples in Southwest Florida Through Archaeology*, is finished and requires only editing and art work. We hope to have both books in print in 1994.

CALUSA ON VIDEO

Funding from the Bureau of Historic Preservation will enable completion of the analysis, curation, and publication of results from Useppa Island and Pineland. But it will also allow us finally to complete our video program.

Thanks to a grant from the Southwest Florida Community Foundation, we were able to hire Ilene Safron's company, Main Sail Productions, to capture the sights and sounds of the Pineland season in 1992.

Now the new grant will enable us to edit the footage, add graphics, music, and voice-overs — in short, to produce a top-quality educational video program that can be shown in schools and on public television.

Stuart Brown, Ilene Safron, and Bill Marquardt began working on the script in October, 1993. The program should be available in 1994.

HERITAGE EDUCATION TO BE TESTED IN LEE AND ALACHUA COUNTIES

The Florida Museum of Natural History has secured a grant of \$39,872 from the Florida Bureau of Historic Preservation to do a pilot phase of a long-term project in

Florida heritage education. The aim is to develop ways that an appreciation for Florida's unique history, archaeology, architecture, folkways, and ethnic diversity can be introduced into the kindergarten through twelfth-grade education system in Florida.

A team of educators, historians, architectural historians, archaeologists, writers, and curriculum specialists will create and test in the classrooms a teacher's activity guide, sample lessons, and other resources. Work began in September, 1993, and classroom testing in Lee and Alachua counties is scheduled for early in 1994.

Suggestions from teachers, students, historic preservationists, and others are welcomed. What works? What doesn't? What kinds of lessons and exercises are most likely to be used in the classroom? What topics should be included? How can they be fit in effectively with existing curricula? Please send your ideas and suggestions to Florida Heritage Education Project, 303 Brantley Harbor Drive, Longwood, Florida 32779, or call 407-788-9006.

FOUR ARRESTED FOR SITE DESTRUCTION

In July, 1992, four men were arrested for racketeering, conspiracy, criminal mischief, and grand theft in connection with the destruction of several protected sites in Charlotte and Lee counties.

The four are believed by authorities to have been responsible for the devastating damage to the nationally significant Big Mound Key site near Cape Haze in 1980, as well as destruction of portions of prehistoric sites on Cayo Costa, Hog Island, Gallagher Key, and Cash Mound.

According to Department of Natural Resources law enforcement officials, an additional 15 people may have been involved in at least 57 illegal digs at protected sites. The racketeering charges carry a maximum sentence of 30 years in prison.

NEW EXHIBITION CENTER TO BE BUILT

The Florida Museum of Natural History has announced receipt of a \$3 Million gift from Steve and Bob Powell to be used to construct the first phase of the Museum's new Exhibition and Education Center. The gift has been matched by \$3 Million from the State of Florida and \$530,000 from the National Endowment for the Humanities. To be located on 34th Street, next to the Harn Museum of Art and the Center for the Performing Arts, the new exhibition hall will feature permanent and temporary ex-

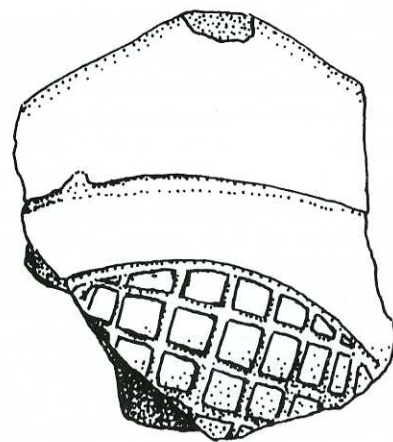
hibits, as well as educational public programs. One of the permanent exhibits planned for the first phase is a major exhibit on the Calusa and their environment. Ground-breaking for the new structure is scheduled for 1994. Those who have visited our exhibits at their present location on Museum Road will be pleased to know that there will be ample parking at the new facility.

ORAL HISTORY: PASSING ON THE STORIES OF FLORIDA FISHERFOLK

"When the mullet were running, they would be the easiest to catch because they would be in these schools. Now, you are not going to believe this, but my husband Sam used to catch whatever he wanted to eat the next day with a pitchfork. They would be right up there. You see, they were running from these other big fish that were on the outside." [excerpt from oral history interview: Esperanza Woodring, b. 1901, d. 1992]

Imagine fishing for a living in Charlotte Harbor during a time when there were seemingly unlimited fish, but also when there were no gasoline-powered boats, no monofilament fishing nets, and no ice.

It is hard for us to grasp the changes in the environment of the Florida Gulf coast in just the past two generations. Bob Edic has spent hundreds of hours listening, recording, transcribing, and thinking about exactly those changes. He has talked with people who have been close to the changes — senior professional fisherfolk of Charlotte Harbor. The result is dozens of pages of never-before-recorded history of southwest Florida's fishing people — recollections of a different way of life, a part of Florida's heritage that has all but disappeared. We will publish a report of Bob's findings in 1994.



A Weeden Island Incised potsherd from the Smith Mound at Pineland.

This issue's good question comes from two students at Tropic Isles Elementary School.

Dear Dr. Marquardt,

Our class is interested in the Calusa Indians. We live in Lee County. What can we do to help your research and to save the Calusa Indian mounds? Please send us a copy of *Calusa News*. Thank you.

Crystal Hale

Melissa Kouwenhoven

(Mrs. Nelson's class)

Dear Crystal and Melissa:

Thank you for your letter. I am sending you the four most recent issues of *Calusa News*. After you read them, I hope you will donate them to your school library so that others can see them, too.

One thing you can do to help our research and help save the Indian mounds is to think beyond your own time. This may sound hard at first, but it isn't. In school you have already learned to think beyond your own neighborhood. You know that what we do in our own houses, schools, and offices affects people, animals, and plants in other neighborhoods. For example, if someone disposes of dangerous chemicals carelessly, then the chemicals may get into everyone's water supply. They could even end up in the Gulf of Mexico and hurt the fish, turtles, manatees, and sea grasses. Understanding that what we do affects other living things in other places is thinking beyond our own neighborhood.

Thinking beyond your own time is just like thinking beyond your own neighborhood. What people did in the past affects us today, and what we do will affect people in the future. Studying the past can tell us how people solved problems and made decisions about their lives and their environments. Knowing how people lived in the past can help us make similar decisions and solve similar problems today. So, if you have ever wondered what life was like in the past or why people did things the way they did, then you're beginning to think beyond your own time. You're starting to think like an archaeologist.

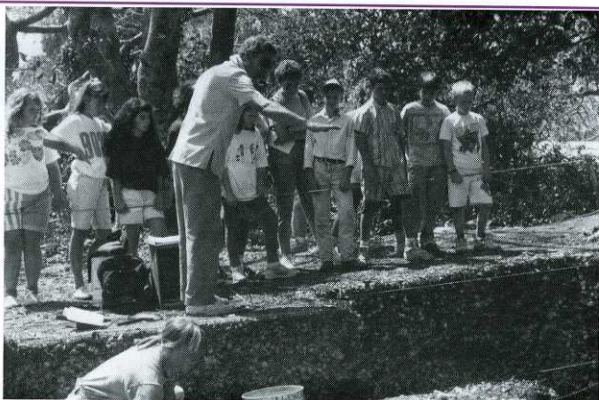
Now that you know how to think like an archaeologist, you can do a lot to help our research and to save the Indian mounds. You can:

- Find out all you can about south Florida Indians and their environments. Read books, go to museums and nature centers, visit archaeological sites, and watch TV shows about archaeology. Talk about what you have learned with your friends and with your teachers.
- Set a good example. If you find artifacts or sites, write to an archaeologist and tell her or him where you saw the artifacts. I always carry a notebook so I can write down what I find. That way I don't forget what I find and where it is. You can do the same thing. If you can, mark where you found things on a map.
- Help others understand that damaging archaeological sites hurts everybody. Most people who disturb sites don't mean any harm—they're just curious. But they're not thinking beyond their own time. When people dig just to find things for themselves, then no one learns anything. To find out the story of the past, archaeologists look for more than just artifacts when they dig. They look for the ways that things relate to each other. They dig very carefully, keep notes, make drawings, and take pictures. This is the only way to find out about the people of the past and their environments.
- Write to your city council members, county commissioners, and state representatives. Ask them to support laws that protect archaeological and historical sites. Ask them to help set up parks where people can go and learn from archaeological sites. People in our governments are elected by the people, and they want to know what everyone thinks. They will be glad you wrote to them.

I hope this answers your questions. As you will read in *Calusa News*, we had a program for school children in 1990 and 1992 at the Pineland site in Lee County. More than 5,000 elementary school students visited the Pineland site and learned about it in their classes. Maybe you were among the students who got to come to Pineland. What we need are more places like Pineland saved and opened to the public. One day we want to have a center for archaeology and education somewhere in southwest Florida—maybe it will be in Lee County. Until then, practice thinking beyond your own neighborhood and beyond your own time.

Sincerely,

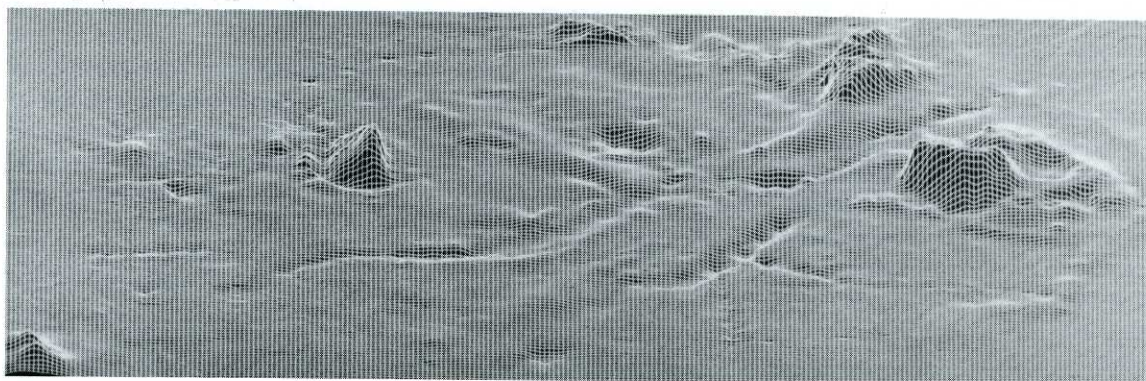
Bill Marquardt, Archaeologist
Florida Museum of Natural History



Bob Edic explains the excavations to Lee County school children, while Jill Bassett (foreground) works in the test pit. (Photo by K. Walker.)



Detailed schematic drawings of the Pineland stratigraphy are prepared by Tom Vogler (left) and Sam Chapman. (Photo by K. Walker.)



Once the map data are in the computer, three-dimensional views of the Pineland site from any elevation and angle can be produced. (Map produced by C. Torrence.)



Reed Toomey explains the excavations at Operation A to Paul Robell (U.F. Associate Vice President for Development), John Lombardi (U.F. President), and Michelle Alar (editor, Pine Island Eagle), as Lee County school children look on. (Photo by K. Walker.)



Corbett Torrence takes a reading using the Topcon laser transit during the mapping at Pineland, 1992. (Photo by K. Walker.)

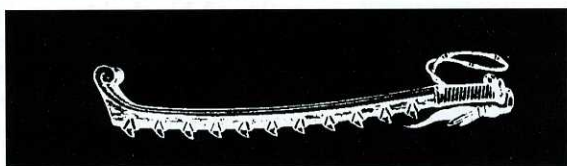
*Oral history
at Pineland
describes the
listening and
with tape re*



re used to help understand twentieth-century land modification
e, long-time Pineland resident Ted Smith (white shirt, with hat)
ent of the "Old Mound" at Pineland when he was a young man.
on Randell (left), Corbett Torrence (center), and Bob Edic (right,
er). (Photo by K. Walker.)



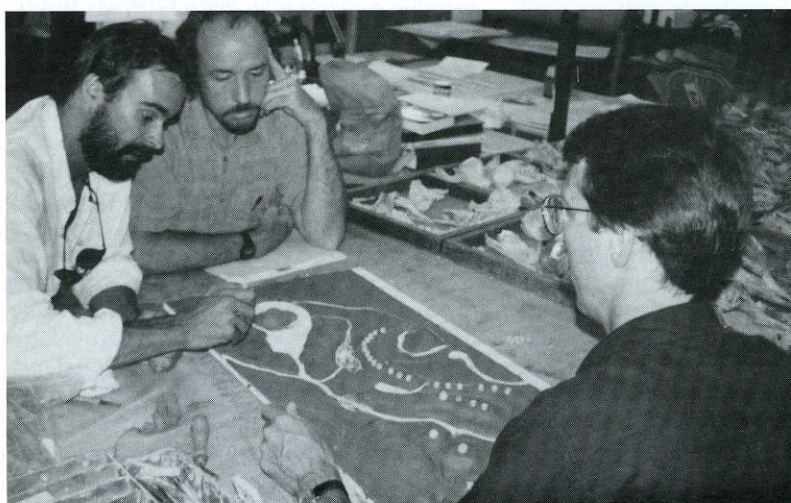
The origin of the citrus grove mound at Pineland is a mystery. Here Sylvia Scudder (left) takes auger samples
to try to solve the puzzle, assisted by Betty Anholt. (Photo by K. Walker.)



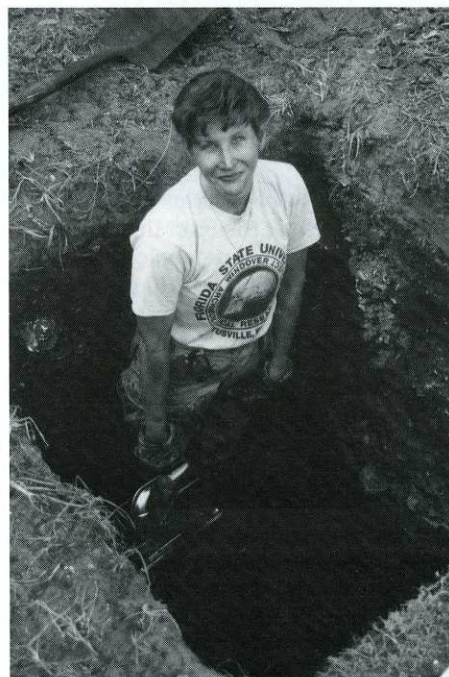
Snapshots 1992-1993



Rob Patton (left), Carol Godwin (center), and Ria Palov
record the Cuban-Spanish occupation on Useppa Island,
May, 1993. (Photo by W. Marquardt.)



Corbett Torrence (left) and Merald Clark (center) offer suggestions to Bill Celander (Museum
of Florida History), who is making a clay model of the Pineland Site Complex. (Photo by W.
Marquardt.)



Susan White attempts to find the bottom of the shell
midden deposit on Useppa Island, May, 1993. (Photo
by W. Marquardt.)



UPDATE

The following is a summary of Project activities since our last report in *Calusa News* no. 6 (February, 1992).

- February, 1992: Bill Marquardt proof-read Chapters 2, 5, and 9 of the monograph, and Karen Walker completed the second draft of Chapter 8. Equipment and supplies were transported to Pineland in anticipation of the 1992 field season. The big green-and-white tent was erected and the field lab was set up under Karen's supervision. Carol Godwin began her auger survey. George Clark put in several back-hoe trenches, while Corbett Torrence, assisted by Jenna Wallace and Jill Bassett, worked on the topographic mapping. Ria Palov set up the computer system. Chuck Blanchard and Bob Edic continued their workshops for teachers in preparation for the upcoming school visits to Pineland. Soil scientists Howard Yamataki and Maxine Levin visited the site. Corbett gave a talk to the Southwest Florida Archaeological Society. Bill Marquardt and Sylvia Scudder gave presentations in Orlando at the First International Conference on Paleo-Archaeology. New computer hardware arrived, thanks to a grant from Paul and Warren Miller and the Hewlett Packard company.

- March, 1992: The Pineland dig opened to the public on March 4. About 35 people worked each day as volunteers. *Calusa News* no. 6 was mailed to over 4,000 people. Geologist Frank Stapor visited Pineland, as did archaeologist Alan May of the Schiele Museum, Gastonia, N.C. Numerous students worked at Pineland during Spring Break. Bill gave a talk to the Warm Mineral Springs Archaeological Society; Karen gave one to the Southwest Florida Archaeological Society.

- April, 1992: Work continued at Pineland,

with daily school visits conducted by Chuck and Bob, and excavations at Brown's Mound, Smith Mound, and the Old Mound. Bill gave a paper on southwest Florida archaeology in Pittsburgh at the Society for American Archaeology meetings. A reception and fund-raiser was held at Pineland on April 12. Bill spoke to the Fort Myers Downtown Rotary Club and the Bonita Springs Historical Society. WINK-TV did a remote broadcast from the Pineland site on April 3rd, featuring Chuck, and Bob and Karen were on a radio talk show on April 5. Sylvia Scudder and Willie Harris were on site for soil science research, and U.F. President John Lombardi visited Pineland on April 9. Preliminary sorting and cataloguing of the Pineland artifacts began in Gainesville. A project to reorganize and recatalogue the Key Marco artifacts began under the supervision of Elise LeCompte-Baer.

- May, 1992: Using a combination of a horizontal well kindly provided by Horizontal Dewatering Systems Inc. and a mud-hog pump loaned us by Kelly Tractor, we were able to excavate to the bottom of the deposits in a 1 x 4 meter area at the Old Mound at Pineland. There we found waterlogged wood, cordage, squash and gourd seeds, and a wooden plank, all extraordinarily well preserved. Elise joined us to help excavate the waterlogged materials, which date to about A.D. 200. U.F. archaeologist Barbara Purdy and U.S. Army Corps of Engineers archaeologist Larry Banks were among the visitors in May. Although the season ended officially on May 9, work actually went on until May 30 due to the discovery of the waterlogged deposits.

- Summer, 1992: After unloading and unpacking the materials excavated at Pineland, most of the summer was spent on inventorying, preliminary analysis, and cataloging of the Pineland materials. Archaeobotanical analysis by Lee Newsom, assisted by Jenna Wallace, revealed not only squash and gourd, but also pepper and papaya seeds in the Pineland waterlogged samples. Corbett accomplished detailed soil analysis for the Useppa excavations of 1989. We learned in July that our "Year of the Indian: Conclusion" proposal had not been funded by the State legislature. We updated the proposal and submitted it for consideration again next year. Visitors to the labs included Mike and Monica Rinker and Mike's cousin Brent, Frank Stapor, Doris Threlkeld, Barbara Dobbs, Bud House, and Shirley House. Elise represented the project in the Florida Museum's Collections on Parade exhibit in August. Karen and Bill began work on a proposal to National Endowment for the Humanities, while Bill wrote one to the South Florida Water Management District

to try to get funds to complete our video program. Karen, Corbett, and Bill completed preliminary reports on excavations at Pineland and Useppa Island for inclusion with the NEH proposal. Progress was made on the monograph, with all chapters and art work being in final form by the first week of August. Patti Bartlett (Fort Myers Historical Museum) volunteered to proof-read the entire 448-page book, while Bill worked on the Index.

- September, 1992: The fall semester began with Susan White, Rob Patton, and Ria Palov handling artifact identification and cataloging, assisted by Donna Nash, Aaron Thornberg, and Mark Allen. Mark continued his study of deer bone from the quarter-inch screens, in cooperation with Karen. Carol Godwin concentrated on the auger survey analysis, while Tom Vogler worked on profile drawings and Corbett handled topographic mapping of Pineland and Useppa shell artifact analysis. Sam Chapman worked on profile drawings and continued his desktop publishing duties with the monograph. Elise LeCompte-Baer trained workers in lab analysis and served as lab supervisor. Susan deFrance did zooarchaeological analysis, while Lee Newsom handled the archaeobotanical studies, assisted by Aaron Thornberg and Audrey-Maria Schwarz. Erica Hill and Andy Wehle served as volunteer workers. Karen Walker coordinated the Pineland analysis, set priorities, and worked on stratigraphic interpretation. Margie Scarry completed her report on the Useppa archaeobotany. Mike Hansinger visited the labs, bringing final corrections to his monograph chapter. Other September visitors included Jim and Betty Anholt. The final, camera-ready copy of the monograph was mailed to the printer on September 24. Sam began typography on Monograph 2, Laura Kozuch's *Sharks and Shark Products In Pre-historic South Florida*.

- October, 1992: The resubmission of the "Year of the Indian: Conclusion" grant proposal was ranked 21st out of 40 recommended by the Historic Preservation Advisory Council. Bill and Karen completed the NEH proposal, mailed October 13. Karen and Lee worked with Dale Hutchinson, who will do some isotope work with some of our samples. Bill gave a "Museum Scientist" lecture at the Florida Museum of Natural History. Bill traveled to Galt Island, where he toured the island and inspected the new road that passed near and over some of the archaeological deposits. He also visited with Don and Pat Randell, doing a reconnaissance of the 18-acre wetland area of Pineland recently acquired by them, and visited with Robin and Jan Brown and Dick Workman. Sue Ellen Hunter joined the project as a volunteer artifact illustra-

tor. At the Southeastern Archaeological Conference in Little Rock, Corbett presented a paper on Useppa, and former Southwest Florida Project member Mike Russo presented two papers on Horr's Island. Along with Patty Jo Watson, Bill served as a discussant of a symposium on Archaic mounds in the Southeast. Karen gave a presentation to the Southeastern Estuarine Ecology Research Society. George Luer paid a visit to the labs.

- November, 1992: Karen defended her dissertation on November 5. Sea-level expert Rhodes Fairbridge, who served on Karen's exam committee, was given a tour of the Pineland site by Bill and Karen. They also visited with the Browns and the Toomeys. Chuck Blanchard was in town briefly on his way to undertake a survey by canoe along the southwest Gulf coast. Elise LeCompte-Baer was hired as the Florida Museum Anthropology department's registrar of collections. Photo albums showing scenes from Pineland were assembled for the Randell family. Typography for Monograph 2 was completed and sent to Patti Bartlett for proofreading. Corbett gave a talk to the Southwest Florida Archaeological Society on the Pineland mapping project. Visitors to the labs included Jim and Susan Lenanne, Sherri Littman, Veletta Canouts, and Susan Coumes.

- December, 1992: Our long-awaited monograph, *Culture and Environment in the Domain of the Calusa*, arrived from the printer on December 7. Conservator Katherine Singley was in town for a week to work on the Key Marco artifact collection, funded by a grant from the Institute of Museum Services. U.F. President Lombardi, along with Vice President Lindgren and Bill Marquardt, went to visit with Don and Pat Randell at Pineland on December 16 to talk about the Randells' plans to donate their ranch to the University of Florida Foundation so that it can be a research and education center. Bill completed the index for Monograph 2. Artifact identification and cataloging of all excavated Pineland materials were completed in December. Visitors in December included Barbara and Reed Toomey, Lori Toomey, and Suzan Watts.

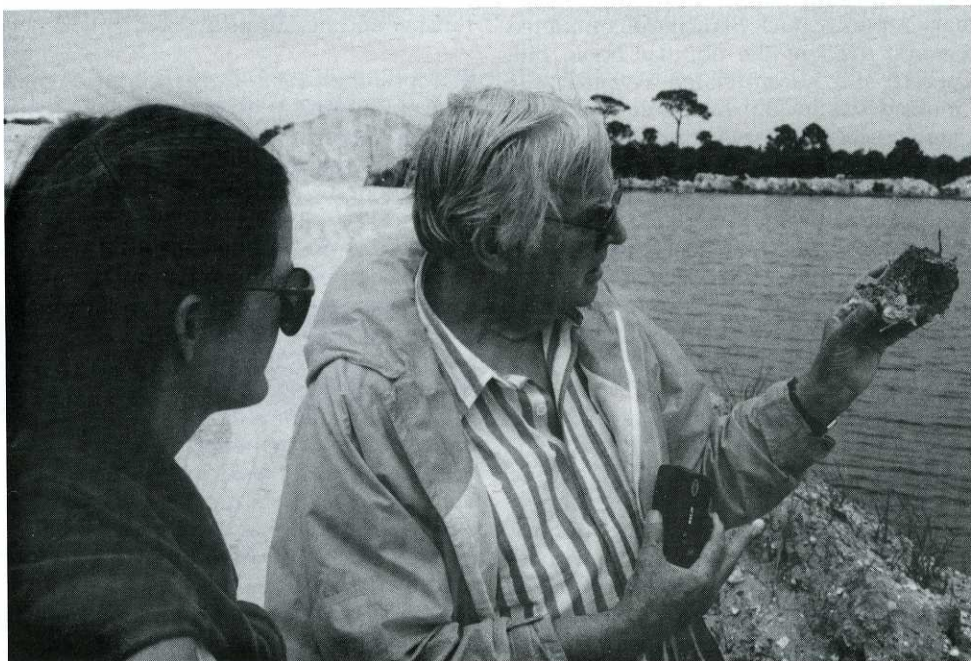
- January, 1993: Detailed analysis of artifacts, soil samples, the auger survey materials, zooarchaeological samples, and archaeobotanical samples began in January under the general direction of Karen. Tom and Sam continued drawing Pineland profiles. Merald completed the cover art for Monograph 2. Using materials excavated at Galt Island, Susan W. began learning to identify pottery pastes microscopically, under the supervision of Ann. Rob concentrated on shell artifacts. Bill gave a talk to the Southwest Florida Archaeologi-

cal Society. Gainesville visitors included Bob and Linda Edic, and Jan and Robin Brown.

- February, 1993: Monograph 2 went to press on February 15. Jorge Marrou joined the project as a volunteer. Laura Smith of U.F.'s Information and Publication Services shot video tape of our lab operations (the resulting video piece was shown on *CNN Headline News* in March). Merald learned wood carving techniques so that he could replicate the Thomasson figurehead. Merald is studying the structure and function of the Key Marco objects for his M.A. thesis. Bill traveled to Boca Raton on February 12 to give a talk to Lambda Alpha, the anthropology honorary society at Florida Atlantic University, and got a tour of their laboratories and a visit to the Jupiter Inlet site. He also gave two talks at the University of South Carolina February 25-26 as a

Vogler's brother, Chris, and Joann Mossa, an expert in coastal geomorphology.

- March, 1993: With volunteer assistance and the support of Gar Beckstead and the Useppa Island Historical Society (Barbara Sumwalt, President), Bill, Ria, Carol, Rob, Corbett, Karen, Susan W., and Tom spent Spring Break on Useppa Island doing an extensive testing project aimed at locating the Cuban fishing settlement of the late 18th/early 19th centuries. Bill gave a talk to the Historical Society on March 9; about 60 people attended. All except Corbett and Ria rode out the "storm of the century" on Useppa Island, with no ill effects. Monograph 2, *Sharks and Shark Products In Prehistoric South Florida*, by Laura Kozuch, arrived from the printer on March 29. Bill and U. F. Foundation real estate director Bruce DeLaney visited with Don and Pat Randell at Pineland on March 30 to talk further



Rhodes Fairbridge discusses the sedimentary history of Pine Island with Karen Walker during a visit in November, 1992. (Photo by W. Marquardt.)

cal Society. Gainesville visitors included Bob and Linda Edic, and Jan and Robin Brown.

guest of the Institute of Archaeology and Anthropology. Karen gave talks to Timesifters Archaeology Society in Sarasota and to UF's Oceanographic Engineering department. Bob Edic resumed his oral history interviewing in southwest Florida. On February 23, NEH informed us of a grant of \$105,000 to help complete the Pineland and Useppa analysis. Paul and Warren Miller granted \$20,000 from their Maple Hill Foundation toward the project, as well. Tom, Rob, and Karen researched remote sensing and GIS (geographic information system) applications to south Florida archaeology and made plans to attend a special session on this topic in April at the Society for American Archaeology meetings in St. Louis. Visitors to the lab included Tom

about the property donation.

- April, 1993: Karen and Bill went to Tallahassee April 1-3 to present a paper, co-authored with geologist Frank Stapor, on prehistoric sea-level fluctuations. The Florida legislature approved a grant of \$189,430 to help complete conservation, curation, and publication for the Year of the Indian project. Ria began analyzing the materials from the Useppa test excavations. Volunteer Julie Henry worked on data entry. Several students from Florida Atlantic University visited our labs on April 9. Bill gave a talk at the Southwest Florida Archaeological Society's Craighead award banquet on the 22nd. Corbett spent time at Pineland setting out boundaries in prepa-

ration for the transfer of the Randell's property and interviewing Ted Smith about changes in the topography at Pineland.

● May, 1993: Summer lab analysis began, with Corbett continuing work on Pineland mapping, Sam and Tom doing profile drawings, Susan deFrance and Donna Nash working on Pineland zooarchaeology, Susan White completing analysis of the Galt Island pottery, Lee Newsom and Jenna Wallace working on Pineland archaeobotany, Rob Patton doing shell artifact analysis, Carol Godwin and Aaron Thornberg analyzing the auger samples from Pineland, Ria Palov continuing the Useppa analysis, and Mark Allen working on analysis of deer bone from Pineland. Bob Austin began analyzing lithic artifacts from Pineland. Pineland analysis was coordinated by Karen Walker. Merald Clark, Sue Ellen Hunter, and Mary Reynolds worked on artifact illustrations. Bob Edic began working on his oral history summary report. Chuck Blanchard completed the first draft of the popular book. Bill, Corbett, and Karen hosted a visit to the Pineland site by Bill Kerrigan of the Archaeological Conservancy. Also visiting Pineland and Mound Key were personnel from the Museum of Florida History, who plan to feature southwest Florida in an exhibit in Tallahassee. During the last week of May, Ria, Rob, Carol, Susan W., Tom, and Bill went back to Useppa Island to complete the test excavations interrupted by the March storm.

● Summer, 1993: Bill, Karen, and Merald wrote *Calusa News* no. 7, and Merald completed the cover art for the issue. Claudine Payne edited Chuck's book manuscript. Research continued on archaeobotany (Jenna Wallace and Laura Payne, supervised by Lee Newsom), zooarchaeology (Susan deFrance, assisted by Laura Kozuch), deer bones (Mark Allen), sediments (Carol Godwin, Sylvia Scudder, assisted by Aaron Thornberg), shell artifacts (Rob Patton), pottery (Ann Cordell and Susan White), and stratigraphy (Karen Walker). Sam Chapman and Tom Vogler drafted Pineland profile diagrams, while Merald Clark worked on illustrations for Chuck's book. Ria Palov analyzed the Useppa artifacts excavated during the March and May trips, while Corbett Torrence worked on Pineland mapping and Useppa shell artifact analysis. Bill and Merald consulted with Barbara Sumwalt about exhibits for the newly-completed Useppa Island Historical Museum, and Corbett consulted with artist David Meo, who was preparing a mural of Pineland for the Fort Myers Historical Museum's new exhibit. Karen and Susan deF. made a brief trip to Pineland in August to gather some additional samples for the time period A.D. 800-1200. Merald went to

the University Museum in Philadelphia to study the Key Marco wooden figureheads. Bill designed a south Florida exhibit for the planned Education/Exhibition Center, helped work out the details of the Pineland land gift, planned the fall Mound Key mapping project, and consulted with Bucky McQueen and others in Charlotte County about a possible archaeology/education project for their area. Ryan Wheeler volunteered to help curate the Republic Groves collection. Elise LeCompte-Baer made progress on the re-housing of the Key Marco collection. Sue Ellen Hunter and Mary Reynolds worked as volunteer artifact illustrators. Visitors to the lab included personnel from the McKissick Museum and Institute of Archaeology and Anthropology, Columbia, South Carolina, as well as Mark Barnes, Mitchell Hope, Muse Norcross, Barbara Toomey, Suzan Watts, Ray Seguin and his wife, Albert Goodyear, Tom Conroy and his wife, the Dean family (Frank, Jeff, Nancy, and Terry), and Kendra Pinsker and her father.

● September, 1993: Corbett worked on a map of Pineland as it appeared in the 1890s during Cushing's visit, with the help of Zeshan Kahn. Susan deFrance continued the Pineland zooarchaeological analysis. Rob worked on Pineland's shell artifacts, identifying possible activity areas. Ann worked on Pineland pottery, and Carol on the Pineland auger survey. Sue Ellen Hunter illustrated Useppa Island artifacts, while Mary Reynolds illustrated Pineland artifacts. Susan White analyzed the Useppa prehistoric ceramics, and Ria Palov studied the Useppa historic-period materials. Karen organized project tasks into a time schedule, supervised the lab projects, and worked on the National Landmark nomination. Merald Clark worked on illustrations for Chuck's popular book. September visitors to our labs included Don Randell, Bea Naylor, and Harry and Jackie Piper. Jenna continued sorting archaeobotanical materials from Pineland. A new grant of \$25,000 was received from the Ruth and Vernon Taylor Foundation.

● October, 1993: An open house was held in the Museum on October 3 in connection with "Florida Archaeology Week." More than 1,500 people toured our labs. Corbett taught a short course on "Archaeology for Beginners" in Naples and Fort Myers for Edison Community College. Bill and Merald worked with Barbara Sumwalt on a script for the introductory exhibit at the Useppa Island Historical Museum. Bob Edic made good progress on the oral history manuscript, in consultation with Karen and Bill. Matt Curtis and Ginnie Reamy began to work as volunteers with Ria on Useppa pottery analysis; Nicole Black, Zeshan Kahn, and Gavin Halsall continued their volun-

teer work, as well. Elise LeCompte-Baer and Susan Fisher continued work on re-housing the Key Marco collections. Carol printed out her pottery data from the auger survey on the master Pineland map. Bill, Karen, and Rob made a brief trip to Apalachicola to get elevations and a sample from the Paradise Point site, believed to be relevant to our continuing sea-level studies. They were assisted by Chad Braley. Pineland analyses were continued by Susan deF., Rob, Karen, and Carol, while Useppa work was done by Ria and Susan W. Sam worked on profile drawings and began to make preparations for the Mound Key mapping project, scheduled to begin in early December. Don Randell visited with University of Florida Foundation officials to work out details of the proposed Pineland land gift. Bill and Karen spent a day in Boca Grande investigating a small site on the property of Robert and Dolores Fletcher, then met Bill Kerrigan and Mark Michel of the Archaeological Conservancy at Pineland. The Archaeological Conservancy agreed to work with us toward the purchase of part of the Pineland Site Complex.

● November, 1993: Bill traveled to Raleigh, N.C., to serve as a discussant of a symposium organized by Jerry Kennedy and his students from Florida Atlantic University. Irv Quitmyer, assisted by John Arthur, began the study of seasonality, using clams, fish bones, and other sources. Corbett returned from field work in the Caribbean and resumed work on the Useppa report. Stratigraphic drawing (Sam) and artifact illustration (Sue Ellen, Mary) continued. Ria assisted various staff members with computer work, and continued the historic artifact analysis for Useppa. Rob, Susan W., Susan deF., and Jenna continued their lab work, while Merald worked on illustrations for the Useppa museum exhibit. Ann completed the last of the Pineland pottery from the 1990 season and began work on the 1992 materials. Carol began working with Sylvia Scudder on detailed soil analysis to try to solve the question of the origin of the citrus grove mound at Pineland. Bill and Karen put together a small exhibit of Pineland artifacts for the Stewards of Heritage Preservation awards ceremony in St. Augustine, November 13, where Don and Pat Randell were honored. Sam and Corbett made preparations for the Mound Key project. Bill and Karen traveled to Washington, D.C., where they presented a paper in a session focusing on complexity among coastal fishing peoples. Bob Edic completed the first draft of his oral history report and Chuck Blanchard finished the second draft of the popular book. Bill and Karen selected photos for *Calusa News* no. 7 and Bill completed the newsletter text. *Calusa News* no. 7 went into production on December 1.

Stable Isotopes and Calusa Food: New Ideas about an Old Question

Dale Hutchinson

Archaeologists have disagreed about the use of cultivated plants, such as corn, in the diet of South Florida Indians. Although no one has ever found corn cob parts or corn kernels in south Florida sites, corn pollen was identified by Elsie Sears at the Fort Center site near Lake Okeechobee dating to about A.D. 300. One possibility is that the corn was being used in rituals, but not consumed on a large scale.

I have been working with Lynette Norr for the past couple of years to identify the isotope "signatures" of some of the human bones recovered from southwest Florida. An isotope is one of several closely related forms of an element. Recently, scientists have discovered that stable isotopes of carbon and nitrogen found in human bone can indicate the kinds of foods commonly consumed by people. Here's how it works.

First we must isolate the organic part of the bone, called "collagen." A small sample of the bone is cleaned, then freeze-dried to take away the moisture. Then it is ground to a powder and soaked in acid to remove minerals and contaminants. In a special oven, the collagen is allowed to combust, and the carbon dioxide and nitrogen gases that escape are captured in sealed glass tubes. Finally, the sealed tubes are taken to the mass spectrometer, which tells us how much of the various isotopes are present.

Theoretically, the isotopic readings from the bones of a person who consumed a lot of corn should be very different from those of a person who ate mostly fish, shellfish, and wild plant foods. But there are complications. Coastal environments offered a wide range of foods, including marine grasses, land grasses, tubers, terrestrial animals, and marine animals. Some of the grasses have signatures that resemble corn, which is a grass-like plant. Even if people did not eat sea grasses directly, the fish they consumed could have eaten such grasses, producing a similar kind of isotopic reading.

So, the next step is to gather samples of modern plants and animals and determine their isotopic signatures. In May, 1992, I collected several plants and animals, including fish and shellfish. Lynette and I have begun to examine their isotopic values. We are optimistic that our work will contribute another tool to be used to reconstruct the Calusa diet and settle some of the old debates about the Calusa use of cultivated plants. We will report our findings in future issues of *Calusa News*.

What To Do If You Find An Archaeological Site

Claudine Payne

Walk around the site and make notes describing the site as well as you can. Think of yourself as a detective at a crime scene trying to get as many clues as possible without disturbing anything. Don't dig or pick up anything. Remember—anything you move may destroy another clue.

Draw a sketch map of the site, showing features or exposed artifacts. Remember to put in a north arrow, a scale, and landmarks (like roads, houses, trees).

Get a map of the area (a U.S. Geological Survey quadrangle map is great, but a road map will do), and mark the location of the site on the map.

Take pictures:

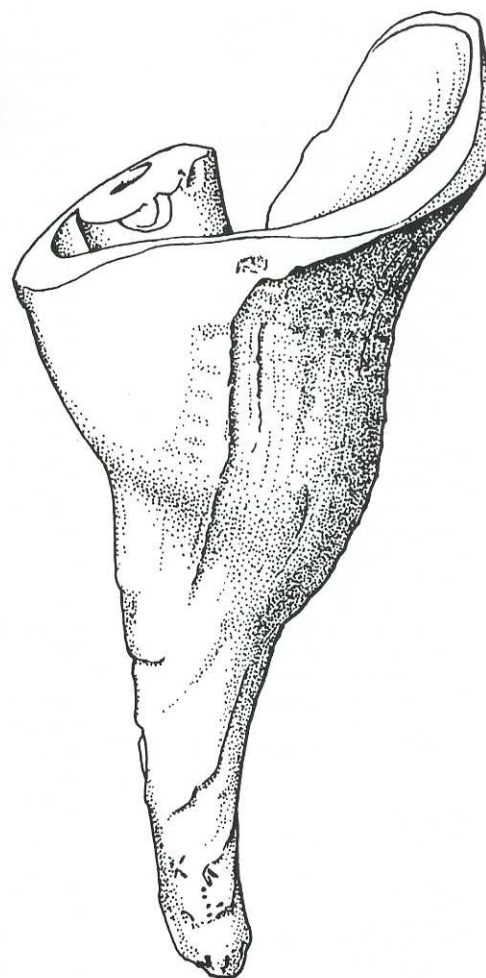
- of the site and its surroundings,
- of any features or artifacts visible,
- of any damage to the site.

After you get the pictures developed, put labels on the backs describing what they show.

Send copies of your pictures, notes, drawings, and map to:

Florida Master Site File
Bureau of Archaeological Research
Division of Historical Resources
500 S. Bronough St.
Tallahassee, Florida 32399-0250

(Reprinted, with permission, from *Archaeology Underwater: Surveying Florida's Past*, by Claudine Payne, 1992.)



The Calusa Constituency



1992

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Hewlett Packard Corporation
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Donald and Patricia Randell
Southwest Florida Community Foundation

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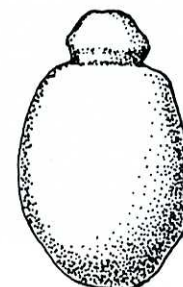
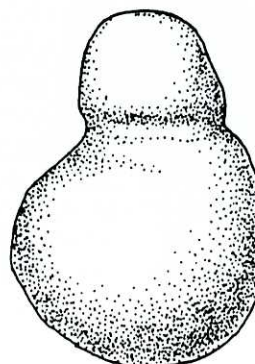
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(Continued on p. 18)



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Wish List

Here is a list of items that we need but that we haven't yet been able to buy through grants or our limited university budget. If you would like to contribute an item, or the funds or buy an item, be assured that your gift is tax deductible, and that it will be put to use in our research and education work.

1. A photocopy machine, new or used, preferably with reduction and enlargement capability. This would save us both money and time, and greatly improve our efficiency.
2. Two wheels, with tires, for our boat trailer. The old ones are getting close to being unsafe even at slow speeds. Estimated cost: about \$100.00 for a pair of wheels and tires.
3. A 35-horsepower outboard motor for our Alumacraft boat. In spite of Bob Edic's valiant attempts to keep it going, the old kicker is just about gone, though the boat is still in good shape. Can anyone help?
4. A Kodak Ektographic or Carousel slide projector, to make it easier for us to give public talks anywhere there is electricity. We already have a portable screen, donated by Tony Cuda. Can someone provide a projector? Cost: about \$500.
5. A video cassette player and portable TV monitor, for showing our project videos at fairs and exhibits and for use in dubbing tapes for schools and museums. Cost: about \$500.
6. Just how old is the Thomasson figurehead shown on page 2? An accelerator mass spectrometer (AMS) date would give us the answer. The AMS dating technique is necessary in this case because a conventional radiocarbon date would require too much of the wood. For an AMS date we would need to remove only one tiny, hardly noticeable piece for dating. Cost of the date: \$550.
7. The research on Horr's Island in 1989-1990 has been briefly summarized in *Calusa News* no. 6, but we would like to prepare a monograph reporting these important excavations. Mike Russo's unpublished 1,002-page report needs to be shortened, edited, typeset, and printed. Funds needed: \$7,500.

In Appreciation

We thank all our members, volunteers, and supporters for helping make this research and education project a success. We want to offer a few special thank-you's to some exceptional people.

Don and Pat Randell have been indefatigable supporters, and their hospitality at Pineland has helped us reach literally thousands of people. Cash matching funds for our National Endowment for the Humanities grant have been generously provided by the **Ruth and Vernon Taylor Foundation** (through the courtesy of **Sara T. Swift**) and by **Paul and Warren Miller's Maple Hill Foundation**. The Millers also helped us purchase, through the **Hewlett-Packard** company's matching gifts program, computer hardware for use in our Useppa Island field laboratory. **Jan and Robin Brown** and **Michael Hansinger** contributed funds that allowed us to extend the Pineland season beyond its scheduled ending date in 1992. In his role as Florida Museum of Natural History Field Associate, **Michael Hansinger** has continued to help us relate to the southwest Florida community. He has also generously donated the proceeds of a property sale for the benefit of the project. We appreciate the continuing support and help of **Reed and Barbara Toomey**, our Florida Museum field associates in Sanibel.

We are grateful to the **National Endowment for the Humanities** and the **Florida Department of State, Bureau of Historic Preservation**, which are supporting the analysis and writing stage of the "Year of the Indian" project. This funding will lead to a popular book, a report on the oral history project, a half-hour video program, and monographs on archaeological findings at Useppa Island and Pineland.

Susan Beckman and **Don Paight** of the Nature Center of Lee County and **Patti Bartlett** of the Fort Myers Historical Museum and their staffs have helped us in innumerable ways during our cooperative "Year of the Indian" project. The perseverance and professionalism of **Ilene Safron** and **Stuart Brown** have put us in a position to expect completion of our video program this coming year.

A grant from the **Southwest Florida Community Foundation** allowed us to capture the Pineland field work on videotape in 1992. A gift from **Oscar Holtenbeck**, matched by the **IBM Corporation**, helped fund Bob Edic's oral history research this past year. **Gloria Sajgo, Annette Snapp, and Gladys Cook** of the Lee County Planning Department have worked in partnership with us in the protection of archaeological resources in Lee County. We thank **Gloria Sajgo, Marion Almy, Marcia Chance, Ken Hardin, Lee Hutchinson-Neff, and Bill Payne** for their lobbying efforts on behalf of the "Year of the Indian" project in 1992.

At the University of Florida, we owe special thanks to **Donine Marlow, Darlene Novak, Andrea Reddish** (Florida Museum of Natural History), **Bing McCrear, Bruce DeLaney, Leslie Bram, Paul Robell, George Cawthon, and Pauli Seabrook** (University of Florida Foundation), **Bob Bird, Cindy McMillen, and Laura Smith** (Department of News and Public Affairs).

Our working relationship with Useppa Island has continued to be positive. **Garfield Beckstead** generously provided free boat transportation and lodging during our March and May, 1993, research on the island. **Barbara Sumwalt**, president of the Useppa Island Historical Society, has been a constant source of good will and encouragement. **Bill Hopp**, long-time Useppa staff member, provided valuable insights on artifacts and ground disturbances over the years on the island. Great kindness and hospitality toward our field crews was bestowed by **Jack and Wynne Wolfe, Robert and Kathe Levenson, Peter and Sally Bergsten, Bill and Lennie Copeland, Herb and Betty Seidel, Bill and Anne Hager, and Bob and Barbara Sumwalt**.

Our work at Pineland would not have been so suc-

cessful without the help of several local businesses and many individuals. **Don Justice of Horizontal Dewatering Systems, Inc.** installed a dewatering system at the Pineland site at the company's expense and loaned us a diesel pump that operated 24 hours a day for several weeks. A pump and a backhoe were generously provided by **Kelly Tractor Co.**, courtesy of **Andrew Pyron, Brian Riddle, Mike Bland, John Hussey, and Dave Julian**. **Gary Susdorf, Dan Aquaviva, Mike Weinberg, and Tom Missimer** of the firm **Missimer and Associates, Inc.** cheerfully provided advice and encouragement in matters of hydrology, pumps, and field strategy in our waterlogged excavation unit. **John Naumann** donated a drum of polyethylene glycol for use in preserving wood from our excavations. **Don and Fran Ostrander** generously provided a complete professional cleaning of our 30' x 30' tent.

Calusa News now reaches over 4,000 people. To all members of the Calusa Constituency and our many friends and well-wishers, thank you for your help and your trust. If you keep up your support, this project will continue to bring new scientific and historical knowledge, as well as educational benefits, to thousands of people.



Where were you when the "Storm of the Century" arrived in March, 1993? Some of us were on Useppa Island. (Photo by W. Marquardt.)

From the Project Director

November 30, 1993

It has been more than a year and a half since the last *Calusa News*, and some of you may be wondering what happened to us. We're alive and well. It isn't that we've had nothing to write about, but exactly the opposite: We've been so *busy* that *Calusa News* — one of our most enjoyable tasks — kept getting buried under pressing responsibilities. We came back from an incredible season at Pineland on May 31, 1992 (see Pineland article, p. 4). Since then it has been a whirlwind of grant proposal writing, artifact curation, exhibit planning, fund-raising, laboratory analysis, and report writing.

In this issue you will find an order form for our first monograph: *Culture and Environment in the Domain of the Calusa*. It's 444 pages of new information on southwest Florida archaeology, with many pages of illustrations, maps, and photographs. It has a sturdy cover and sewn signatures — that means it won't fall apart very easily. By today's standards, it's reasonably priced at \$25, and you can have it for \$20 if you're a member of the Calusa Constituency. (Members of the Calusa Constituency are those who contribute \$10 or more per year to our research and education efforts. Their contributions are tax-deductible.)

The order form was printed before our second monograph was available, but now you can order it, too. Laura Kozuch's *Sharks and Shark Products in Prehistoric South Florida* is 52 pages long, and is full of information on shark habits, shark-hunting techniques, shark artifacts, and trade in shark products throughout south

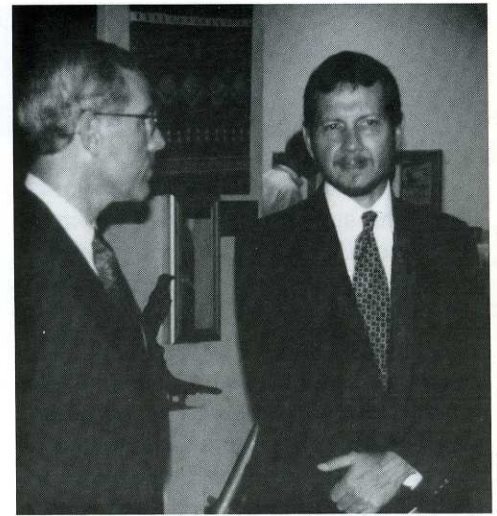
Florida. It's only \$5 (\$4 for members).

So the bad news is that *Calusa News* was delayed, but the good news is that we have grants from the National Endowment for the Humanities and from the Florida Department of State to get more work done and get more information out to you! We're planning something for everybody.

For you Calusa Indian/southwest Florida archaeology enthusiasts (there are many, I'm pleased to say), we are working on a monograph on the archaeology of Useppa Island and another one on the archaeology of Pineland. A fascinating summary report of the oral history project, by Bob Edic, is in the works, and will be available in a matter of months. A factual, but non-technical book about southwest Florida prehistoric Indians, by Chuck Blanchard, is almost ready to go to press. Finally, if you would rather watch television than read, we'll have a half-hour video program on southwest Florida archaeology available in 1994.

I'm so excited about these projects that I can hardly sit still. In addition, for the first time in my museum career, I'm going to have the opportunity to help design a major exhibit for our new Florida Museum of Natural History Education/Exhibition Center. The exhibit will tell the story of south Florida's rich but fragile environments, and of the people who lived and prospered there for thousands of years before the coming of the Europeans.

I'm thrilled to have the opportunity to work with my natural-science colleagues and with the talented designers and artists in our museum's interpretation department. The challenging and slightly scary part is that after years of visiting museums all over the country with a critical attitude, I now have to help de-



Bill Marquardt (right) discusses the Year of the Indian project with Florida Secretary of State Jim Smith. Secretary Smith was in Fort Myers to present the check to pay for the analytic and writing phase of the project. (Photo by K. Walker.)

sign a major exhibit myself. As we all know, it's always easier to criticize something that it is to create something, and the thought that literally hundreds of thousands of people will see our south Florida exhibit each year makes me want to do the job as well as I possibly can.

Please let me know what you would like to see in our south Florida museum exhibit. I would really like to hear your ideas. You can write to me at the Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611.

Finally, let me say again that without your contributions and interest, we would not even be in a position to be contemplating the Florida Museum's first major exhibit on south Florida Indians and environments. Thank you for your continuing support, and best wishes for 1994. Sincerely,

Bill Marquardt
William H. Marquardt,
Project Director

William H. Marquardt
Florida Museum of Natural History
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Gainesville, Florida 32611-2035 USA

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