



# CALUSA NEWS

NEWSLETTER OF THE SOUTHWEST FLORIDA PROJECT

INSTITUTE OF ARCHAEOLOGY AND PALEOENVIRONMENTAL STUDIES

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## The Forgotten Floridians

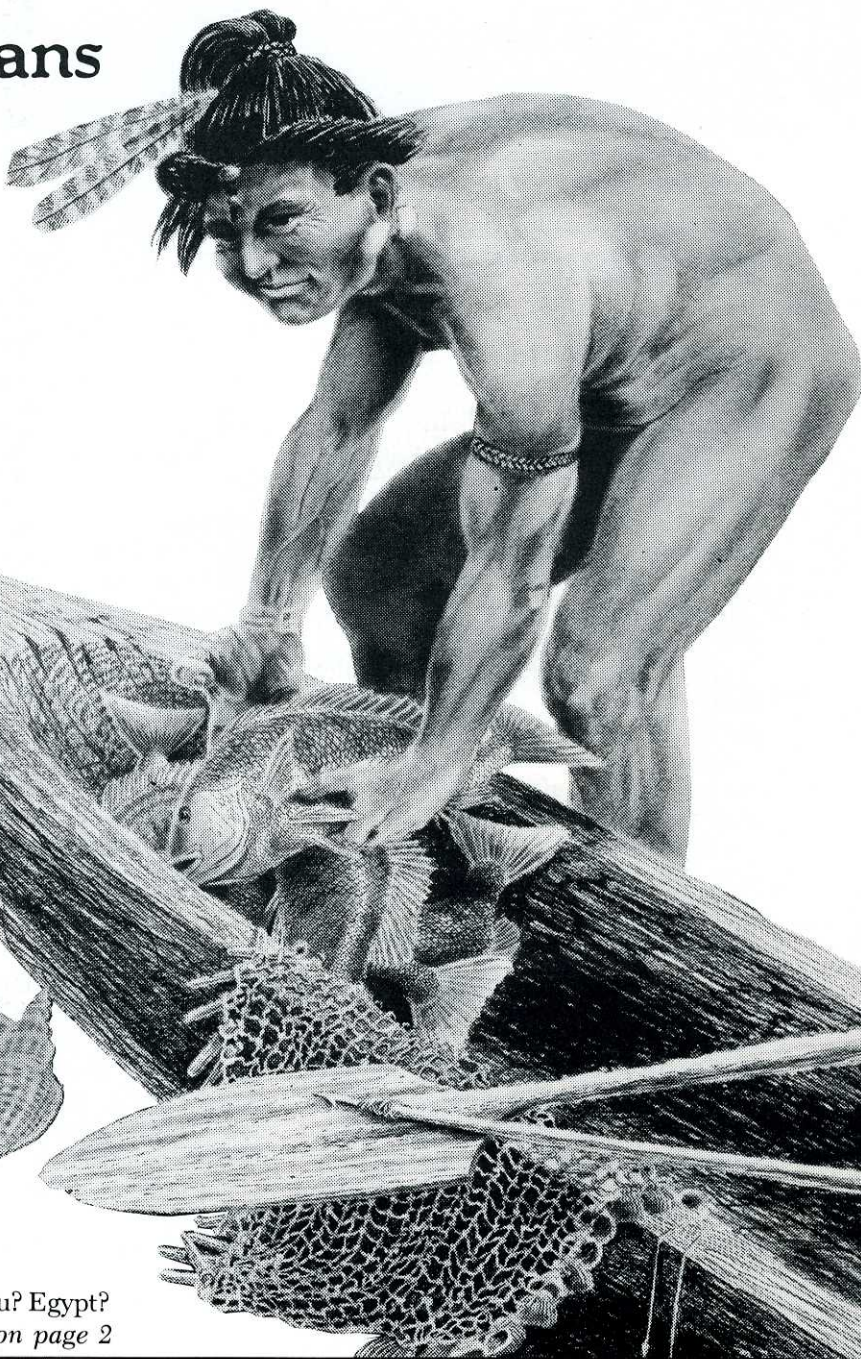
Imagine a seaside kingdom of thousands of people. Approaching by canoe, you can see villages on islands near and far. On the mainland are ceremonial mounds and thatched temples. The sweet smoke of buttonwood rises from cooking fires, and from across the flat, calm waters comes the clatter of shell hammers at work at another nearby settlement. A big mullet jumps — once, twice — before your silent craft. Perched in a dappled green and yellow mangrove tree, a glossy black cormorant regards your approach as it dries its outstretched wings.

Remarkable is this kingdom. Its capital town lies on the coast, but the king knows what is happening 500 miles away. Powerful and influential, he is believed to communicate with the spirits of the dead, and can sentence a citizen to death or execute a captive at will. His wishes are enforced by an elite corps of soldiers armed with spears and arrows; when needed, they can travel to faraway places in canoes that hold 50 people. The house where the king and his wives dwell is so large that two thousand people can stand inside without being crowded. He and his fellow nobles do not work — food and other material necessities are provided by commoners, and tribute in the form of hides, mats, feathers, and captives is brought to the king from towns over a hundred miles away.

Skillful and hardworking are his people. Artists carve, paint, and engrave, their handiwork especially visible during ceremonies and feasts. At such times there are singers and dancers, and processions of masked priests. No crops are raised here, for the kingdom has no need of corn: these people are fortunate to live in one of the world's most productive environments, and their natural surroundings provide all that they need for food, tools, clothing, and shelter.

Where is this kingdom of high artistic achievement, sophistication, and political power? Mexico? Guatemala? Peru? Egypt?

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Gumbo limbo trees still grow on remnants of shell midden destroyed by bulldozing on Galt Island several years ago.



Walt Buschelman (left) and Art Lee search for artifacts in the sifter at Galt Island.

## A First Glimpse of Galt Island

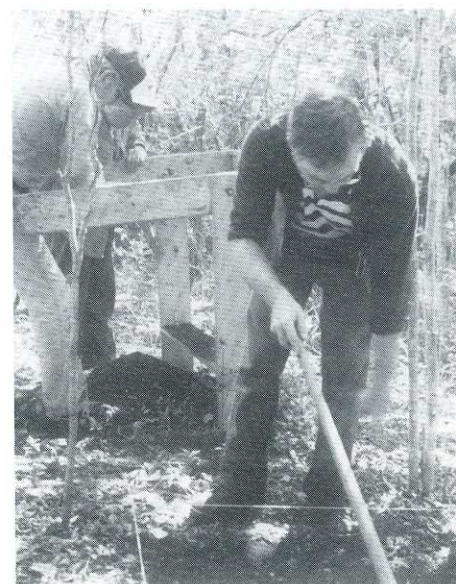
In October, 1987, with the help of dedicated volunteers and some financial assistance from property owner William Mills, Bill Marquardt was able to dig five test excavations at the Galt Island site, located off the southwestern tip of Pine Island. A total of 35 people, mostly from Pine Island and from the Southwest Florida Archaeological Society in Naples, worked 660 volunteer hours: digging, taking notes, sifting, then filling in the holes.

Galt Island is made up of a complex array of shell ridges, shell knolls, canals, coves, plazas, and two unusual mounds. One is a fork-shaped burial mound, which unfortunately has been badly disturbed by looters. The other is a high, steep-sided mound about 115' long, 33' wide, and over 10' high; its

shape resembles an upside down boat hull. Its function is unknown.

Pottery found in the test pits and radiocarbon dates show that the site was lived on between A.D. 300 and A.D. 1300, or about 700 to 1700 years ago.

We hope to be able to return to Galt Island for further studies. Galt is very important because it is a large and relatively well-preserved site complex located in the heart of the Calusa domain. Although Galt Island is scheduled for development, the current property owners have shown every indication that they intend to build around — not on top of — the archaeological sites and to preserve the rich natural resources that make the island so attractive today.



Wayne and Shirley House (left) work the sifter while John Beriault digs at Galt Island.

### The Forgotten Floridians *(continued from page 1)*

No. It is in Pine Island Sound, near present-day Fort Myers. The time? Less than 400 years ago.

It is the kingdom of the Calusa, one of the most complex fishing-gathering-hunting societies known in the history of humankind. A few undisturbed archaeological sites and some scattered Spanish documents are all that remain of south Florida's most populous, advanced, and powerful people, the Calusa and their neighbors: the forgotten Floridians.

Since 1984, with the help of local citizens and granting agencies, a University of Florida research team has set out to bring the Calusa heritage

back to life. We also hope to learn other things that can directly help our own society, such as facts about environmental changes and potentially useful plants, and knowledge about how societies as complex as the Calusa develop from simpler ones.

The purpose of *Calusa News* is to share the excitement and value of archaeology with everyone. We hope you enjoy it.

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## CALUSA NEWS

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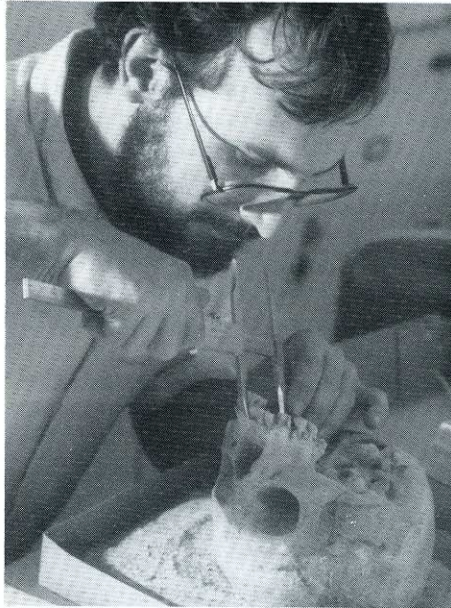
# Buck Key Burials Studied

Thanks to a grant to the Institute from the Ding Darling Society of Sanibel Island, Dale Hutchinson has completed an intensive biocultural study of the four Indian individuals excavated from the Buck Key Burial Mound (see *Calusa News* no. 1, p. 3).

The prominent central individual, a robust adult female of about 30 years, had been placed in a "flexed," or fetal-like position. That she is female is clear from her pelvic bones, and her height (about 5'2") can be estimated based on the length of her femur and tibia (upper and lower leg bones).

Based on the pattern of its teeth, the second individual appears to have been only 4-6 years old at the time of death. The sex of the child, however, cannot be determined. The child's remains had been placed near the head of the central, flexed female.

Remains of a third person, a 5 foot adult male, were disarticulated, that is, they were not in the correct anatomical position. This is an example of the custom of "bundle burial," in which bones of the dead are stripped of their flesh and stored for a time before burial. This person's bones were found adjacent to the flexed female's left shoulder and arm. He had suffered from one abscessed tooth and his teeth also showed "grooving," a condition suggesting that he used his teeth as



Physical anthropologist Dale Hutchinson takes measurements of a human skull from Buck Key.

tools, perhaps in manufacturing rope or nets.

The fourth individual, an adult female (at least 24 years old), had been placed adjacent to the lower legs of the central female. This person was at least partially articulated at death. She suffered from dental cavities and her teeth also showed that she may have experienced a period of nutritional and/or disease stress during her childhood years.

To begin to make reliable generalizations about the health and physical

characteristics of south Florida's first people, many more burials would have to be studied. Proper excavation and laboratory analysis are time consuming and therefore expensive, and our current funding is not adequate to the task at hand. Few studies of prehistoric south Florida burial populations have been done, so the Buck Key burials are very significant, especially in view of the fact that nearly all known Indian burial sites in south Florida have already been destroyed by looters.



Surveyor Jim Marshall works on a map of the earthworks at Big Mound Key.

## Indian Geometry in Southwest Florida?

Jim Marshall makes his living as a civil engineer in Schaumburg, Illinois, but his real passion is mapping and studying prehistoric earthworks (effigy mounds, temple mounds, platform mounds, and the like).

Over a period of years Jim has mapped dozens of prehistoric earthworks throughout eastern North America. Using precise measurements, he has concluded that geometric regularities underlie the Indian earthworks. Native Indian construction of earthworks in Ohio and Illinois indicates that a standard unit of measure-

ment was used at a variety of sites, and that plans for the works must have been drawn up before construction began.

Working in cooperation with the Institute, Jim has recently turned his attention to the great shell mounds of Charlotte Harbor and Pine Island Sound, with the hope of detecting similar regularities in their construction. Preliminary work has already been done at Big Mound Key and the Pineland site. He hopes to return to the area in October of 1988 to continue his study.



# October, 1697: A Clash of Ideas

Missionizing efforts were never successful in south Florida. An initial Jesuit attempt among the Calusa and Tocobaga in 1566-1570 ended in failure, but although two Calusa chiefs and several noblemen were killed by the Spanish, the Calusa political system apparently was little affected. By 1612 a powerful chief in the Charlotte Harbor area controlled 70 villages of his own, and many other villages in south Florida paid tribute to him.

Thanks to a grant from the Wentworth Foundation, several documents pertaining to the 1600s in the Calusa area have been found in the Archives of the Indies in Seville, Spain, and transcribed by historian Victoria Stapells-Johnson. With the cooperation of Gary Shapiro and Jim Miller of the Florida Division of Historical Resources, John Hann has translated the documents into English for publication in our forthcoming monograph.

According to one document, there were about 14,000 Indians in the Calusa province in 1692, some 2,000 of whom lived on the island where the chief's village was located. The chief's village itself had 16 houses.

In July of 1692 the Calusa chief visited Havana, and it is recorded that he asked that a mission be established in his kingdom. On September 18, 1697, four Franciscan missionaries arrived to establish such a mission, bringing with them enough food and clothing to last them six months. However, when it became clear that the missionaries did not intend to distribute the goods among the Indians, in exchange for their conversion, the Calusa nobles turned hostile toward the

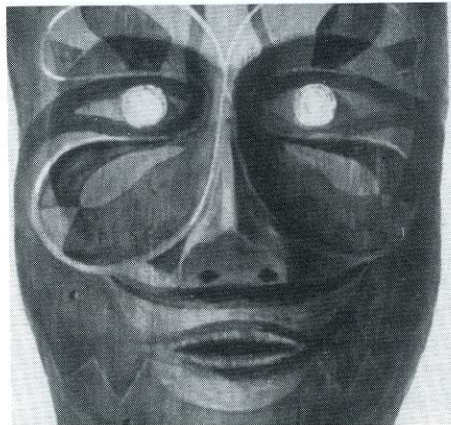


Neither the Jesuits nor the Franciscans were successful in converting the south Florida Indians to Christianity.

priests. "If you are not going to give us food and clothing, what good is it to become a Christian?" they asked.

Undaunted, the priests insisted that the Indians cease worshiping their own gods. The natives' religious temple, or *mahoma*, was long, wide, and tall, with one door. Within the building was a mound or altar of earth with a kind of bench or latticework structure on its peak. The altar and walls were covered with matting and with grotesque long-nosed masks.

The Spanish priests went into the sacred building with lanterns and recited the rosary at length, holding



Wooden masks, perhaps similar to this Key Marco example, were said to cover the walls in the Calusa temple. (Photo courtesy Smithsonian Institution.)

aloft an image of the Virgin Mary. The Indians had had enough, and threatened the priests with death if they would not leave the community.

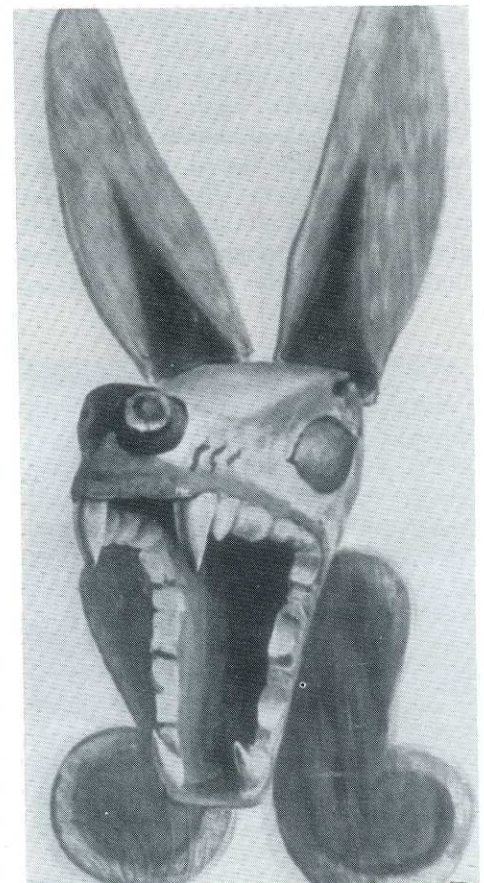
The priests were given a canoe and two small boats for their belongings. However, Indians from the communities of Muspa and Teya relieved them of their provisions and clothing as they made their way south toward Spanish Cuba. Some thirty days later the naked and starving missionaries were rescued, finally making it back to Havana in February of 1698.

The whole episode sounds like a big misunderstanding. Most of the Calusa had no interest in converting to Christianity, but simply wanted Spanish food and clothing. The Indians figured that the priests were keeping for themselves gifts that the king of Spain had sent to the Indians. The priests thought that the Indians had invited them there because they really wanted

to become Christians, and were busy trying to cast out the devil.

The Indians' treatment of the priests seems harsh to us, but, to put it in perspective, most Christians today would be quite upset if fanatical priests waving torches and statues were to force their way into their places of worship and begin to chant. With all due respect for the sincerity of the Franciscans, their behavior was not very subtle, and their actions resulted in being shown the door.

The account is interesting because it tells us that thousands of Calusa Indians were still thriving in Pine Island Sound as late as the closing years of the seventeenth century. It also shows that the ancient religious ideas of the Calusa were still alive and very important to them, adds another Calusa word (*mahoma*) to the scant word list we have of their language, and gives insight into ways the Calusa made decisions.



This carved wooden figurehead found at the Key Marco site in 1896 may have been used in Indian religious ceremonies. (Photo courtesy Smithsonian Institution.)

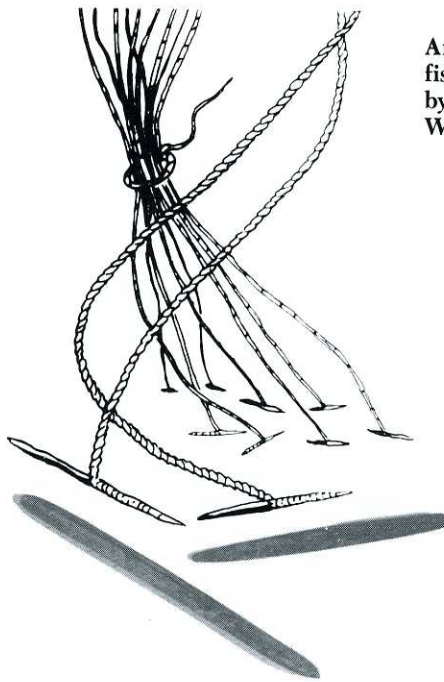


# Fishing in the Estuary: 40 Centuries of Success

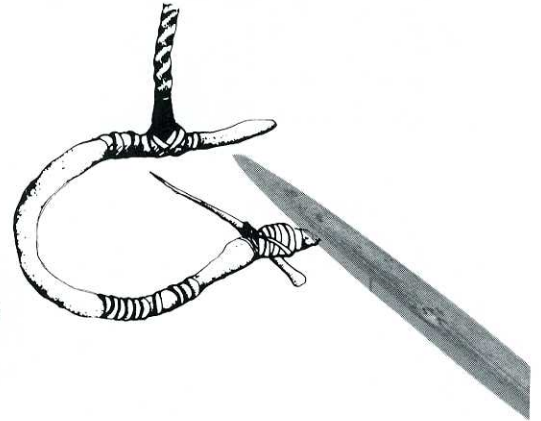
The Calusa and their ancestors probably caught many fish in tidal traps. Wickerwork devices allowed fish into canals at high tide, then were closed, stranding the fish in shallow water where they could be easily netted or speared as the tide receded. But the Calusa and their predecessors also used two fishing techniques widely used today — nets and hooks.

Just as today's commercial fisherman has a variety of nets for different sized fish, so did the Indians. They wove nets with varying sizes of mesh for different functions. Gill nets, seine nets, and small dip nets were all expertly used by southwest Florida coastal Indians.

Evidence for this comes from two main sources. First, in Collier county, at the remarkable wet muck site called Key Marco, Frank Cushing in 1896 found well-preserved nets, cords, ropes, and anchors. Mangrove sticks and bottle gourds were used as floats, big whelk shells and chunks of limestone were used as anchors, and small arc shells were used as net weights. Second, our zooarchaeological analysis of the Charlotte Harbor middens shows that many kinds of fishes of different sizes were eaten by the prehistoric Indians.



Artifacts such as pointed bones probably represent fishing gear. (Drawing adapted from *Indian Fishing*, by Hilary Stewart, pp. 37, 45; University of Washington Press, Seattle, 1977.)



In addition to nets, the Indians crafted and used compound hooks made of wood and bone. After hundreds of years of being buried in the ground, the wooden parts have disappeared, but numerous bone artifacts, usually called "points" or "pins," have

been excavated in south Florida. We believe that many of these represent barbs for compound fish hooks. Other small bone points may have been used as throat gorges to catch bottom-feeding fish.



Tom Parkinson retired this year after working at the Boca Grande Fishery for over 46 years. (Photo courtesy *Boca Beacon*, Boca Grande, Florida.)

## The Fishing Heritage

Senior fishermen like Tom Parkinson of Boca Grande have been around long enough to have seen some significant changes in southwest Florida. Some of his memories about the waters of Charlotte Harbor and its historic fishing tradition are being recorded by anthropologist Bob Edic of Boca Grande. Bob, along with David Futch and Paula Johnson, also of Boca Grande, hope to secure funding for a systematic collection of oral histories so that Charlotte Harbor's heritage will not be lost (see *Calusa News* no. 1, p. 13).

Bob's recording of Tom's comments concerning our zooarchaeological research has already provided valuable insights into our interpretation of the Indian fishing industry. For example,

Tom says that cyclical disappearances of certain fish can be a result of red tide kills. Grouper have just recently made a comeback from a devastating kill in 1948. On the other hand, he notes that pinfish and pigfish make much more rapid recoveries.

Tom also remembers that scallops and certain fishes, such as the sawfish, were plentiful at certain times in the past, but these animals are seldom seen in the harbor today. Conversely, blue crabs were rare when Tom was a boy, but today they are numerous. We hope to relate Tom's understanding of changes in the harbor to known biological variables and to changes we are beginning to understand from looking at bones and shells in the ancient Indian sites.





# UPDATE

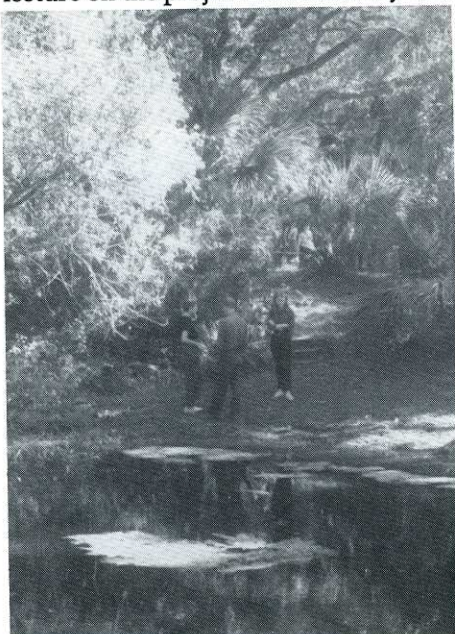
Here is a brief summary of what has been done since our last report (see *Calusa News* no. 1, pp. 6, 7, 10, and 11).

- December, 1986: December 4 found project director Bill Marquardt in Philadelphia, where he presented a paper at the annual meeting of the American Anthropological Association, entitled "The Calusa Social Formation in Protohistoric South Florida." Bill Marquardt, Irv Quitmyer, Bobby Knight (Bokeelia), and Betsy Reitz (visiting scientist, University of Georgia) went to Charlotte Harbor December 18-20, where they collected fish and clams, the 11th of 12 scheduled collecting trips. Physical anthropologist Dale Hutchinson completed his analysis and report on the Buck Key burials. On December 30 Bill Marquardt and Jeff Chapman (archaeologist, University of Tennessee) spoke at a fundraising gathering for the proposed museum on Useppa Island, a project being coordinated by the Useppa Island Historical Society.

- January, 1987: On January 8-10 archaeobotanists Margie Scarry and Lee Newsom, accompanied by Bill Marquardt and visitors Patty Jo Watson (archaeologist, Washington University, St. Louis), Chris Hensley-Martin, and Ron Martin, collected modern plant specimens on Buck Key, Josslyn Island, and Big Mound Key, assisted by Don Cyzewski of Bokeelia, who provided boat transportation. Plants were also collected near Hickey Creek the next day, with the help of Jan and Robin Brown of Fort Myers. On January 17 Irv Quitmyer, assisted by Tom Nutter, Lee Bloomcamp, Robert Taylor, and Bobby Knight, collected fish and

shellfish, the 12th of 12 scheduled collection trips to Charlotte Harbor. In addition to regular collections, some cone shells were gathered to assist in Tom's medical research.

- February, 1987: On February 4 Bill Marquardt, along with Pat Ball and Ed Norman of Sarasota, went to Pineland and Useppa Island to plan the upcoming field trip/fundraiser. On Friday, February 6 Pat and Judy Ball hosted a party at their Sarasota home for 50 people who had signed up for the trip, and Bill Marquardt gave an introductory lecture on the project. On Saturday and



Patty Jo Watson, Chris Hensley-Martin, and Robin Brown (foreground) admire the natural beauty of Hickey Creek, while Lee Newsom and Margie Scarry (background) collect plant specimens, January, 1987.

Sunday the 7th and 8th half of the group each day was given tours of the Pineland site and Useppa Island. Irv Quitmyer, Steve Hale, Janice Quitmyer, and Bobby Knight accomplished a follow-up fish and shellfish collection trip on February 14. On February 25 Bill Marquardt presented a colloquium to the U.F. Department of Anthropology called "Cultural and Environmental Change in South Florida, 3500 B.C. — A.D. 1700."

- March, 1987: On March 6-7 both Irv Quitmyer and Karen Jo Walker exhibited posters on their southwest Florida research at the national meeting of the Society for Ethnobiology in Gainesville. Laboratory work in zooarchaeology, ceramic technology, and archaeobotany continued. On

March 11 Bill Marquardt gave a talk to the Pine Island Historical Society in Pine Island Center. He then drove to Boca Grande to meet with Jim Marshall about mapping Big Mound Key and other sites (see p. 3 of this newsletter). The next day, Pat Ball brought his boat down from Sarasota and took Marshall, along with Bob Edic (Boca Grande) and George Luer (Sarasota), to see Big Mound Key in person. On March 20-21 a last follow-up collection trip was made to Charlotte Harbor. Irv Quitmyer, Liz Wing, Doug Jones, Mike Russo, and Bobby Knight collected fish and shellfish and excavated the experimental middens (see p. 11, this newsletter). On March 31 George Luer came to Gainesville to consult with zooarchaeologist Karen Jo Walker about her forthcoming analysis of the pit feature from Big Mound Key. George also brought three large containers of plain pottery that he had collected from a looted site (see p. 12, this newsletter).

- April, 1987: April 2 and 3 were spent washing the pottery George had brought and preparing it for analysis. On Thursday, April 2, Carol Allin and Erick Lindblad from the Sanibel-Captiva Conservation Foundation visited the museum and were given tours of the anthropology and zooarchaeology ranges. On April 9 Bill Marquardt journeyed to Tallahassee to give a colloquium for the F.S.U. Department of Anthropology and to present a public lecture, "Archaeological Research in the Calusa Heartland." On April 12 Bill Marquardt and Lee Newsom gave a joint presentation on "Masks: Their Structure, Function, and Meaning," in conjunction with an exhibit dealing with Calusa masks at the Lee County Nature Center in Fort Myers. Human bones from Buck Key were prepared for curation and all artifacts recovered so far during our project were organized in preparation for detailed study. Labwork continued. An article about our project written by Jan Brown was published in *Gulf Coast Living* magazine.

- May, 1987: On May 10 Bill Marquardt gave a Mother's Day presentation at the Fort Myers Historical Museum entitled, "Motherhood, Apple Pie, and Calusa Indians." On May 15 Bill spoke in St. Petersburg to the Suncoast Archaeological and Paleontological Society. Laboratory work con-



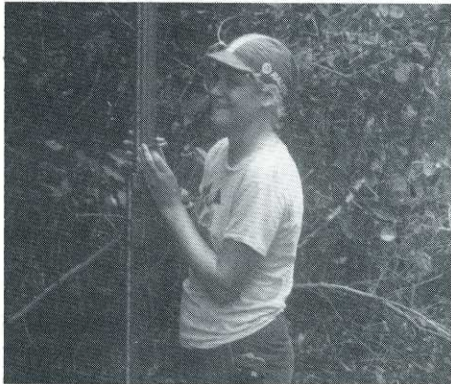
tinued in May, and the latter part of the month was spent at Big Mound Key and Josslyn Island. With the cooperation of Bob Repenning and Craig Blocker (Charlotte Harbor State Reserve) and Don and Pat Randell (Pineland), Jim Marshall and his assistant Kathleen Richert spent from May 21 to May 28 mapping at the two sites in order to document the massive mound structures. From May 24 through May 30, Bill Marquardt and Karen Jo Walker dug a test excavation on Josslyn Island, ably assisted by



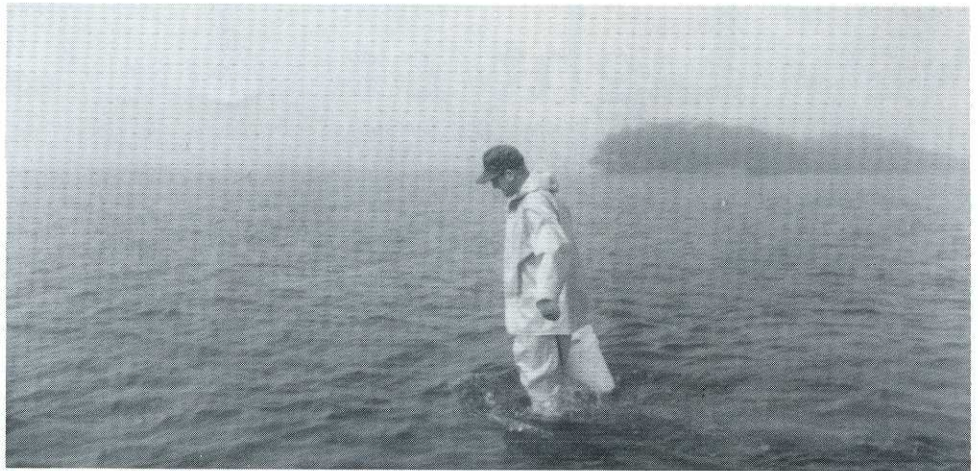
One of the experimental middens is excavated, March, 1987. Pictured (from left) are Mike Russo, Doug Jones, and Liz Wing.

volunteers from Bokeelia (Don Cyzewski, Janice Kemp, Mary Sims, Trish Storm, Steve Wise), Boca Grande (Bob Edic, Linda Edic), Sanibel (Phyllis Harned, Debbie Schoss), Fort Myers (Robin, Cotton, and Steven Brown), and Arizona (Bruce Walker, Karen's brother).

• Summer, 1987: Analysis of the experimental midden got underway, laboratory work on other aspects of the project continued, and Karen Jo Walker finished her zooarchaeology analysis. Kathleen Richert volunteered to catalogue the pottery collection from Boggess Ridge, and Bob Edic came to



Kathleen Richert holds the stadia rod for Jim Marshall during the earthwork mapping project, May, 1987.



Bobby Knight helps collect clams for the seasonality study on a damp winter day in Charlotte Harbor.

Gainesville in mid-June to help wash and prepare the Josslyn artifacts for analysis. On June 27 Timesifters, an archaeological society from Sarasota, visited the museum and was given a tour of the anthropology and zooarchaeology labs. In July Spanish Point at the Oaks, Osprey, Florida, published a 40-page *Guide to Prehistory*, a guidebook to local archaeology written by George Luer and Marion Almy, and edited by Bill Marquardt and Spanish Point director Linda Williams. (The book is available at Spanish Point for \$1.50.)

• September, 1987: Analysis of ceramics, clam shells, and plant remains continued, museum volunteer Janet Rackley Kuhs began to work on the Boggess Ridge pottery collection, and Jim Wagner began to work on graphics. The Project was represented at the Florida State Museum's annual "Open House" by an artifact display, a special poster prepared by Janet, and a 10-minute automated slide show prepared by Bill Marquardt.

• October, 1987: Victoria Stapells Johnson, our historian contact in Seville, Spain, succeeded in getting some important Calusa documents transcribed, and John Hann agreed to translate them into English for publication, with the cooperation of Gary Shapiro and Jim Miller (Florida Division of Historical Resources). On October 10 Bill Marquardt gave a talk on the Calusa to the Micanopy Historical Society. Test excavations on Galt Island began on October 11, assisted by Jack Gaddy (St. James City), Lonnie Jordan (Bokeelia), and John Beriault, Art Lee, Joe Long, Virginia Beville, and Alice Ash of the Southwest Florida Ar-

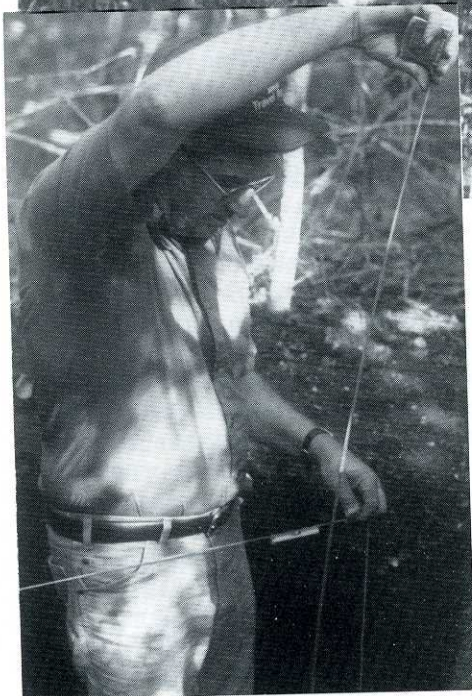
chaeological Society (Naples). Work was cut short on October 12 by Hurricane Floyd, but work resumed on October 16 and lasted until October 25. Assisting in the second period of field work were Kathy Ball, James Beriault, John Beriault, Jim Burch, Walt Buschelman, Al Felsberg, Isabel Felsberg, Jack Gaddy, Gary Grochowski, Shirley House, Wayne House, Bill Kemper, Art Lee, Lynn Lee, William Mills, Moe Mullen, Delmar Moon, Joyce Moon, Kate Muldoon, Doug Paniccione, Keith Paniccione, Leo Ruble, Ray Seguin, Gordon Shanks, Pat Snearley, Gary Susdorf, Mary Vogenberger, Karen Jo Walker, Susan Watts, Kevin Watts, Mary Ruth Winchell, and Eleanor Young.

• November, 1987: In November lab work continued, including washing the pottery and other artifacts recovered from Galt Island. Liz Wing and Irv Quitmyer finished the first draft of their report on the midden experiment. Four Southwest Florida Project papers were given at the annual meeting of the Southeastern Archaeological Conference in Charleston, S.C.: Ann Cordell ("Technological Investigation of Pottery Variability in Southwest Florida"), Bill Marquardt ("South Floridian Contacts With the Bahamas: A Review and Some Speculations"), Karen Jo Walker ("Charlotte Harbor Maritime Adaptation: Synchronic and Diachronic Variation"), and Elizabeth Wing and Irv Quitmyer ("A Modern Midden Experiment"). Bill also journeyed to Freeport, Bahamas, to give a paper on South Florida to the *Bahamas 1492* conference, sponsored by the Grand Bahama Port Authority.

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# New Light on the Calusa Past



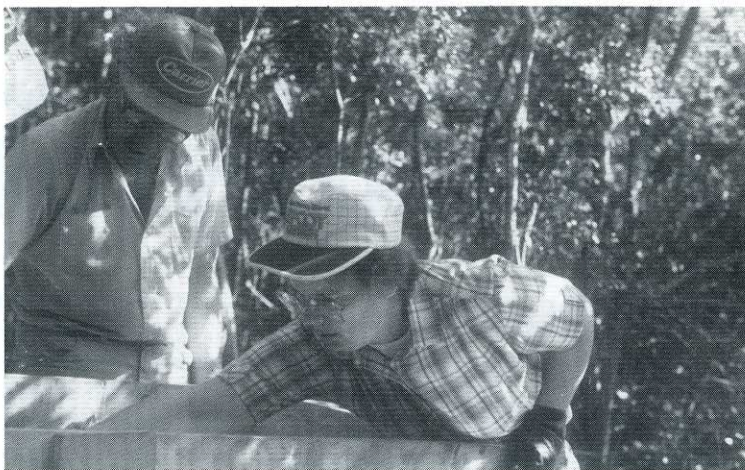
Wayne House takes a depth reading with the line level, Galt Island.



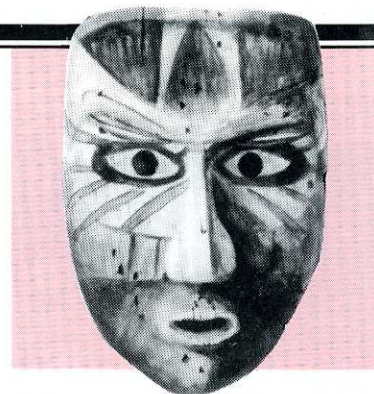
Bobby Knight (left) shows Bill Marquardt how to "shuck" a mullet from a net, December, 1986.

A lovely buttonwood and black mangrove swamp surrounds the archaeological site on Galt Island. The prehistoric Indians often used wood from such trees for firewood, probably for smoking fish.





Bill Kemper and Mary Vogenberger work at Galt Island, October, 1987.

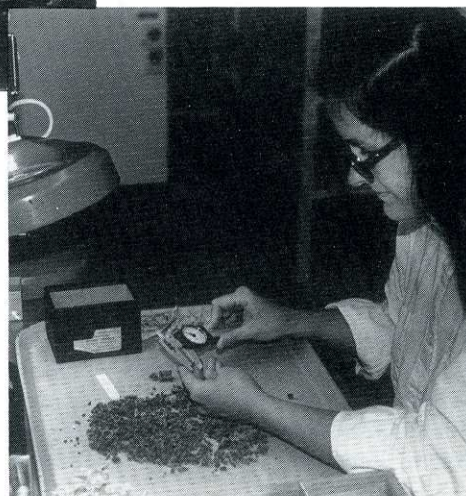


Excavations at Josslyn Island in May revealed many bone artifacts and a firepit feature dated to A.D. 900. From left to right: Cotton Brown, Janice Kemp, Don Cyzewski, Bruce Walker, Robin Brown, and Karen Jo Walker.



Janice Kemp, Don Cyzewski, and Karen Jo Walker work to maintain a straight profile for the 2 x 3 meter test pit at Josslyn Island, May, 1987.

Zooarchaeological work continued in 1987. Here vertebrae are measured in order to estimate the sizes of fish the Indians caught.







Much of December, 1987, was spent analyzing the pottery from Galt Island. Pictured: Bill Marquardt, Project Director.

• December, 1987: Analysis of the Galt Island pottery continued; a preliminary report to property owner William Mills was completed by Bill Marquardt. An article by Bill on Calusa politics in the historical period appeared in a book called *Power Relations and State Formation*, published by the American Anthropological Association. Bill Marquardt and Karen Jo Walker went to Bonita Springs on December 17 to be given a tour of archaeological sites on the Bonita Bay development property. They talked with Dennis Gilkey, Jim Osterling, and Glenn van Riper about ways to cooperate in local educational and excavation programs, then drove on to Naples where Bill Marquardt and John Beriault gave a joint presentation about Galt Island to the Southwest Florida Archaeological Society, whose members had been instrumental in the early mapping and later test excavation of the site.

• January, 1988: Laboratory work neared completion on many aspects of the project, and plans began to take shape for a 14-chapter book reporting our research results so far. Bill examined and identified some artifacts for the Fort Myers Historical Museum, assisted by Jon Leader, Jeff Mitchem, and Karen Jo Walker. On January 18 Bob Edic, Paula Johnson, and David Futch of Boca Grande visited to talk about cooperative work in local oral history, and Paula shot some videotape of our laboratory work. Bill and Karen Jo spent half of January preparing the second issue of *Calusa News* (it went to the typesetter on February 2).

# A Busy Year

## Josslyn Island Revisited

Funded by a grant from Col. and Mrs. Don Randell, archaeologists returned to Josslyn Island (see *Calusa News* no. 1, p. 2) during May of 1987 to excavate an area that included the remains of an Indian fire dating to ca. A.D. 900. Digging through two feet of moderately dense shell and bone midden, an area of thick ash began to appear in the black earth. Careful excavation revealed that the fire pit reached a depth of four feet below the surface.



A fragment of an unidentified bone tool found at Josslyn Island, May, 1987.

Those working the sifter screens reported many varieties of shells, some having been used as tools and net weights. Whelk shell dippers, hammers, and net weights were probably common items in Indian daily life. Two polished, rectangular cut whelk shell pieces were also discovered. Their function is unknown, but they closely resemble items found in Collier county at the Key Marco site.

Several kinds of bone implements, made from the leg bones of whitetailed deer, were found. Numerous fishing barbs and throat gorges attest to the well-developed fishing industry of the native south Floridians. One fragment of a carved bone artifact is a mystery (see photograph); can anyone suggest its function?

In addition to the shell and bone tools, numerous pottery fragments and limestone rocks were discovered. One large limestone rock with a hole in it was quite likely used as an anchor, either for a small boat or for a large net.

## Midden Experiment: Losses and Gains

Results of the modern midden experiment (see *Calusa News* no. 1, p. 12), initiated in the fall of 1986 by Elizabeth Wing and Irv Quitmyer, show that only 77 percent of the fish and shellfish refuse we deposited was recovered by excavation a year later.

One purpose of the experiment was to investigate the impact of animal scavengers on the composition of a shell midden. The greatest loss of materials was due to birds, which quickly claimed small, raw fish parts while ignoring the remains of cooked fish.

Different fishes were found to exhibit different recovery percentages. For example, mullet (*Mugil*) showed a sur-



Steve Hale excavates one of the experimental middens.



# in Southwest Florida

prisingly high degree of recovery in the modern middens even though mullet remains are scarce in the prehistoric middens. Redfish (*Sciaenops ocellatus*), a common estuarine fish, showed a lower recovery rate — 19 percent and 36 percent in the two modern middens.

Additions to the middens not made by researchers include numerous plant seeds, fishes (a result of a red tide kill and inundation), land snails, scorpions, and bird feathers.

## 4000 Potsherds: A Closer Look

Over 4,000 fragments of primarily undecorated sand-tempered pottery from southwest Florida are being analyzed with new laboratory techniques by Ann Cordell (see *Calusa News* no. 1, p. 14). Pot sherds from Buck Key (A.D. 1040 — 1350), Josslyn Island (A.D. 800 — 1200), Cash Mound (A.D. 200 — 700), and Useppa Island are included in the study.

Because Indians in southwest Florida made undecorated pottery (called "Glades Plain") from about 500 B.C. to as late as the 1500s A.D., it has been difficult to use the pottery to tell how old the Indian sites are.

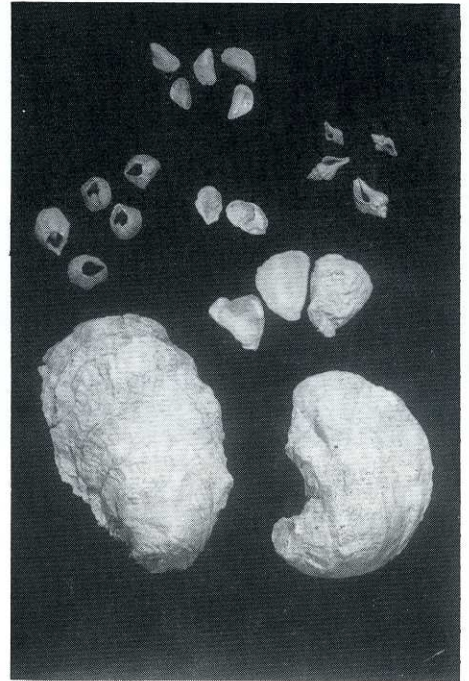
Ann's challenge has been to learn to detect variability in this "plain" pottery

that cannot be easily seen with the unaided eye. By using a microscope, Ann has identified certain mineralogical properties of the clay used to make the pottery, and she can now recognize and sort the pottery into three major categories within the "plain" pottery. These varieties of plainware correspond with different time periods of Indian culture in southwest Florida.

We are continuing to search for sources of clay in the area (see *Calusa News* no. 1, p. 14) to add to our understanding of local Indian pottery manufacture. Anyone knowing of natural clay sources in Lee or Charlotte counties is requested to call Ann Cordell at (904) 392-1721.

## Cash Mound Commensals Show Harbor Changes

A great variety of information can be read from mollusk shells discarded by the Indians of coastal southwest Florida. One example of this comes from the Charlotte Harbor site known as Cash Mound (see *Calusa News* no. 1, p. 3). Common oysters and their commensals excavated from Cash Mound have a story to tell about environmental conditions that existed during their lifetimes.

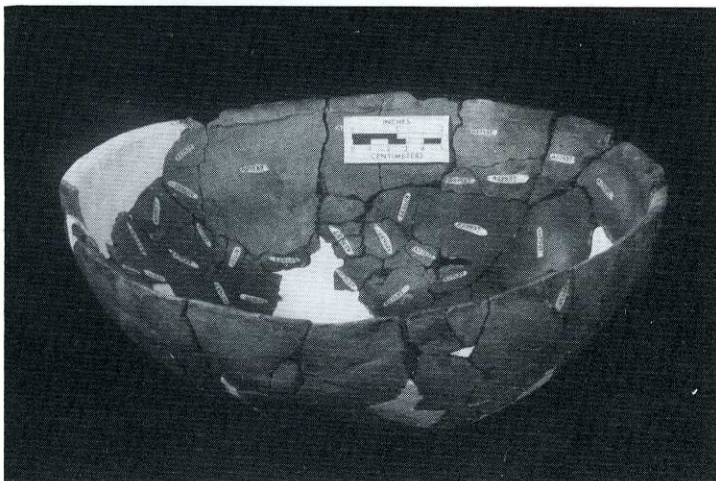


Common oysters and their commensal species provide clues to changing environmental conditions.

A commensal is any plant or animal that lives with others for support or mutual benefit. Commensals such as boring sponges (*Cliona*) and crested oyster (*Ostrea equestris*) are reliable indicators of the amount of salt in the estuary's water, and this information helps us reconstruct climates of the past.

For example, during times of great rainfall, Charlotte Harbor's water becomes less salty due to the flow of fresh rainwater from the Caloosahatchee, Myakka, and Peace rivers. Sea level rises and falls can also affect the water's salt content.

In the Cash mound shells zooarchaeologist Karen Jo Walker has detected evidence suggesting that during the A.D. 270 occupation of Cash Mound sea level may actually have been higher than today's. Shells excavated from a more recent Cash Mound occupation — one dating to A.D. 680 — suggest that the water level had probably gone back down again by that time.



This plain sand-tempered bowl found on Buck Key was reconstructed by Ann Cordell.



# Boggess Pottery Comes Together

Looters who plundered an important Charlotte Harbor archaeological site, Boggess Ridge, were unaware of the potential knowledge destroyed by their thoughtless activity. Bill Marquardt and Sarasota archaeologist George Luer collected some of the broken Indian pottery left by the vandals in the hope that at least some knowledge could be salvaged (see photograph, *Calusa News* no. 1, p. 9).

The loss of deposit context usually renders archaeological objects useless to the archaeologist. But through the generous effort of Florida State Museum volunteer Janet Rackley Kuhs, we are learning some basic information about the Indian pottery at this site. Janet has spent hundreds of laboratory hours in the sorting and reconstruction of the Boggess Ridge pottery.

Her work follows the method developed by Ann Cordell, ceramic technologist at the Florida State Museum, in which matching pottery fragments are first glued together, then a putty substance resembling "plastic wood" is used to fill in some of the missing pieces so that the vessel is stable enough to stand up on its own. The end

result is a recreated vessel that can be studied, compared with pottery from

other sites, and used in exhibits on south Florida prehistory.



Ann Cordell (left) shows volunteer Janet Rackley Kuhs how to reconstruct a pottery vessel.

# The Telltale Clam

The secrets of Charlotte Harbor's clams are being unraveled by Irv Quitmyer and Doug Jones. Both modern-day clams and clam shells left by prehistoric Indians are being studied in order to determine the season in which the clams were harvested. When many archaeological samples have been studied and compared, we will have a better understanding of the productivity of local marine food resources and the effects of human exploitation on them.

In much the same way that tree rings tell the history of a tree's life, the light and dark bands seen in a cross section of the clam's shell correspond to slow and fast growth periods (see *Calusa News* no. 1, p. 12). After making observations and measurements on clams collected recently from two different

locations in Charlotte Harbor, Irv and Doug are able to discover what times of the year clams in Charlotte Harbor grow quickly and what times they grow slowly.

Applying this knowledge to the clams from Indian sites, they are now able to say what times of the year the Indians were living at certain places and collecting the quahog clams. For example, this technique shows that the 51 clam shells recovered from the Josslyn Island dig in 1987 (see "Josslyn Island Revisited," p. 10, this issue) were collected from a highly productive bed during late winter to early spring. Clams may have been an important food resource at that time of the year because certain plant foods (fruits, nuts) and fish (such as mullet) are not very plentiful then.



Doug Jones (left) and Irv Quitmyer work at sawing clams so that their cross sections can be examined.



# Ancient Use of Woods

Lee Newsom is discovering that different kinds of woods were used by prehistoric southwest Florida Indians for specific purposes. Over the past year she has studied both the preserved wooden artifacts from the Key Marco site in Collier County and charcoal fragments excavated by our crews in Lee and Charlotte counties.

Using a microscope, Lee has determined that many of the beautiful Key Marco pieces were carved from cypress wood. To prepare samples for viewing under the microscope, she removes very small slices with a razor blade, mounts them on glass slides, then compares their patterns with known samples from modern trees.

The Indians also burned wood for warmth, light, cooking, and pottery firing. Charcoal fragments from their fires are frequently found in the archaeological sites they left behind. Lee examines the charcoal fragments by first snapping them in two, then viewing the exposed surfaces directly under the microscope, without placing them on slides. Again, the patterns are compared with samples taken from known kinds of trees. Black mangrove, buttonwood, and pine were commonly used for firewood by the Indians.



Lee Newsom examines wood specimens to identify the kinds of plants used by the Indians. The famous Key Marco "woodpecker" is painted on a slab of cypress wood (photo courtesy Smithsonian Institution). Lower left: the distinctive pattern of bald cypress, as it appears through the microscope.



It is clear that the Calusa and their ancestors used many different kinds of plants for varied purposes — food, medicines, dyes, adhesives, buildings, everyday tools, fuel, and even special ceremonial objects, such as the famous

Key Marco masks. The wood study gives us an understanding of these activities, while also providing information about the environment in which the Indians lived.

## In Appreciation:

On page 15 we list the membership of the Calusa Constituency — those who give at least \$10 per year toward our preservation and research program in southwest Florida. We thank all of you for your help! We could not operate without it.

Throughout 1987 we continued to enjoy the friendship of many people. Jan and Robin Brown again provided a rent-free, furnished house for our crews to stay in while in the southwest Florida area. Michael Hansinger acted as a clearinghouse for public information about the project, and assisted with many local contacts. Don and Pat Randell cheerfully made their property at Pineland available for our lectures and tours.

The February fundraiser was a success due to the help of several people. Pat and Judy Ball hosted a party at

their home for the 50 participants, and Pat Ball logged many hours promoting the project in the Sarasota area. Linda Williams, Lois Jones, George Luer, and Marion Almy have also helped our efforts in the Sarasota/Osprey area. Through the courtesy of Jim Palincsar, the University of Florida Foundation defrayed the insurance premium for the fundraising trips. The staff of Useppa Island was courteous and accommodating.

Our fish and shellfish collecting trips have been made effective and enjoyable by Bobby Knight, who has added much to our understanding of fishing in Charlotte Harbor. Thanks are also due Bob Repenning, Charlotte Harbor State Reserve, for facilitating permit requests and making every effort to assist us in our research. Craig Blocker courteously assisted during our map-

ping efforts on Big Mound Key.

Donna McMillan did a wonderful job as our administrative assistant for the National Science Foundation grant, and Christy Morris of the University of Florida Foundation cheerfully and effectively handled our Foundation disbursements. Special thanks go also to Pauli Seabrook for handling gift receipts from the Calusa Constituency. The interest and support of several archaeological and historical organizations are gratefully acknowledged: Southwest Florida Archaeological Society (Naples), Fort Myers Historical Museum (Fort Myers), Lee County Nature Center (Fort Myers), Island Historical Museum (Sanibel), Sanibel-Captiva Conservation Association, Useppa Island Historical Society (Useppa Island), Museum of the Islands

*continued on page 14*



## In Appreciation:

*continued from page 13*

(Pineland), and Timesifters (Sarasota).

Field work was facilitated by the loan of a john boat from Robin and Jan Brown and a small motor from Don Cyzewski. Jack and Ann Gaddy of St. James City allowed their home to be used as a headquarters and communications center during the Galt Island project; their help is sincerely appreciated. Betty Katz of Pine Island kindly provided photographs of the Galt Island project, as did Wayne

House, Pat Snearley, and Ken Hardin. Phil Shevlin helped with press information and coordination of the visit of Rep. Tim Ireland to Galt Island. Roger Taylor (Lee County Mosquito Control) kindly kept us informed about archaeological sites in the harbor.

We are grateful to Prof. Anthony Randazzo, U.F. Department of Geology, who allowed us to use the department's carbonate saw to slice the clams for seasonality studies.

Field volunteers are acknowledged elsewhere in this newsletter, but here we wish also to thank Bob Edic, Kathleen Richert, and Janet Rackley

Kuhs for their volunteer laboratory work, and Jim Wagner for his drafting and artwork. We also appreciate the efforts of Marilyn Whetzel, who coordinates the Florida State Museum volunteer program. Victoria Stapells Johnson (Seville, Spain) is thanked for her efforts in getting the Spanish documents transcribed for us in Seville. Jim Miller, State Archaeologist, and Gary Shapiro, Director of the San Luis Archaeological and Historical Site in Tallahassee, are thanked for allowing historian John Hann to use his time to translate the seventeenth century documents for publication.

# What's Next?

The first phase of the project is complete. Now we have the basic tool kit we need to tackle the really interesting questions about Southwest Florida's past. We have discovered facts about when the Indians lived at various places and the environments in which they lived, learned new skills, and made friends in the Charlotte/Lee/Collier county region. This year we expect to publish a 400-page monograph reporting scientific and historical findings of our first four years of research. What's next? Everything!

**Excavation.** Over the next few years we want to open up larger areas at three or more sites that we know represent different time periods in the development of south Florida's Indian societies. Calusa sites have been known about for over 100 years, but no one has ever carefully uncovered a Calusa house (or if anyone has, they have kept it a secret from the rest of us). By carefully digging more expansive excavations, we should be able to find houses, plazas, and places where certain activities took place — cooking, pottery making, tool manufacture, and the like. We should be able to distinguish between areas where nobles and commoners lived; such research has been done successfully elsewhere by studying burials, house sizes, and food remains.

**Exhibits and Public Education.** The more we learn, the more we can teach.

Local museums and nature centers should have exhibits on the environmental and cultural history of southwest Florida. We can help. The new Florida State Museum Exhibition Center in Gainesville, scheduled to be completed in 1992, should have a major permanent exhibit on southwest Florida. We can help design it. Some Florida school children learn about the Seminole or Miccosukee Indians, but there is little or no attention given to the 14,000-year story of Florida's native Indians. Archaeologists must get together with local schoolteachers to help develop lessons on Florida's prehistoric past. By becoming more aware of their environment and how others have lived in it, the students will be better prepared to be future Florida citizens.

**Research, Analysis, Writing.** If done with the proper training and care, archaeology can provide useful knowledge. Digging for and exhibiting artifacts is enjoyable, but for every hour spent digging, about fifty must be spent studying what has been found. Laboratory work, artifact conservation, record keeping, and writing of results are very time consuming activities, but it is wrong to dig up sites and then do inadequate analysis. We must continue to allow time for studying and interpreting the artifacts we find, and for reporting our work to both the scientific community and the public.

**How to Pay for it.** We can do additional excavations, publish more books, provide for public participation, and work with local museums and school districts in south Florida if we can raise the money to pay for our time and expenses. These activities can be funded on a project-by-project basis, and we will be happy to talk with representatives of any civic association or agency about the costs.

**The Long Term.** Southwest Florida people have demonstrated that they care about preserving and learning from the past, and some have given freely of their time and money. Foundations, such as the Ruth and Vernon Taylor Foundation, have provided needed operating funds, as have our sustaining members, the Schultzes and Randells.

We have had some success in getting Federal grants to help, but grant funds are scarce and competition is fierce. The University of Florida has provided office and lab space, a truck, a telephone, postage, photocopying, and other logistical assistance. But the University provides no salaries — not for the project director, not for any of the project staff.

To pay for a permanent program in south Florida archaeology, we need an

*continued on page 16*





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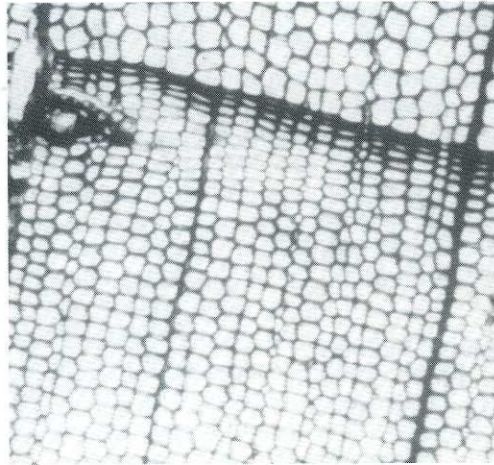
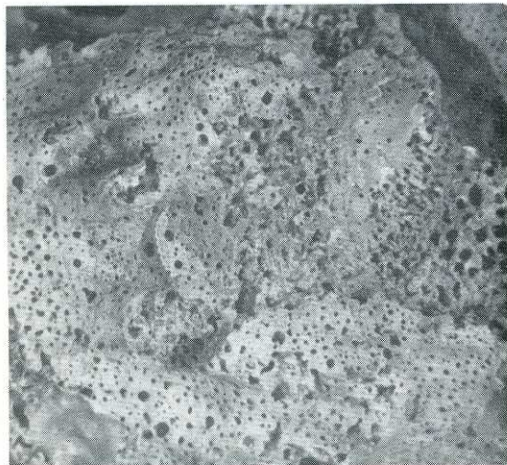
## The Calusa Constituency





# Mystery Photos

Can you identify these photographs? All represent important activities of the Southwest Florida Project in the past year. (Answers below.)



Clockwise, from upper left: Spanish manuscripts concerning southwest Florida, recently translated by John Hann; an unusual piece of locally-made pottery found at Galt Island resembles incense burners from Mexico and Guatemala; a slide of pine wood, viewed under the microscope; close-up photograph of tiny holes bored into oyster shells by Cliona sponges.

## What's Next?

*continued from page 14*

endowment that will provide operating money each year, forever.

A fund to provide a new university curatorship in Florida archaeology can be initiated for as little as \$100,000; such a gift would be matched with \$50,000 in state funds. Another program is the "eminent scholar" endowment, in which a gift of \$600,000 is matched with state funds of \$400,000, to create a \$1,000,000 permanently-endowed chair. There are other programs. Anyone wishing further information about such endowments can contact the University of Florida Foundation at (904) 392-1691.

**We Need Your Help.** We depend on contributions from The Calusa Constituency to pay for student salaries, travel expenses, supplies, and the publication of *Calusa News*. All contributions are appreciated, no matter what the amount, and they will be put to good use in research and public education.

All contributions are tax deductible if the checks are made out to *University of Florida Foundation*. They should be mailed to Dr. William H. Marquardt, The Florida State Museum, University of Florida, Gainesville, Florida 32611.

Thank you.

*Bill Marquardt*

Bill Marquardt  
Project Director



CALUSA NEWS

WILLIAM H. MARQUARDT

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