

## A Very Special Seashell

Loved by Florida tourists, used for tools by the Calusa, and sacred to many Indian people of the southeastern U.S.

by Bill Marquardt and Laura Kozuch

**If you have ever collected Shells** on a beach in Southwest Florida, you almost surely have a lightning whelk in your possession. This beautiful mollusk (*Sinistrofulgur sinistrum*) is named for the colorful, jagged lines visible on its outer surface. It lives in marine waters of the southern Atlantic coast of the U.S., much more frequently along the Gulf of Mexico from the Florida Keys to Texas, and along the Mexican Gulf coast as far as the Yucatán peninsula. The whelk grows slowly and can live for many years, with some individuals growing to over a foot long. One of the biggest lightning-whelk shells in the world can be seen on Sanibel Island at the Bailey-Matthews National Shell Museum

There are many fascinating shells, so what's so special about a lightning whelk? If you have a collection of seashells, get it out and find all the snails—the ones that spiral, as opposed to the bivalves, such as clams and oysters, which have two flat sides. Now lay out all the snails with their spires up (the spire is the swirly end, where the helix gets smaller and smaller until it comes to a point). If you have a lightning whelk in your collection, you'll quickly see that it is distinctive in one obvious way: *it opens on the left, not the right*. Such snails are referred to as sinistral; those that open on the right are called dextral. Another way of expressing this is to say that when viewed from the top of the spire, and then tracing the helix from the edge into the center, the lightning whelk shell spirals clockwise, not counter-clockwise as do almost all other snails in the world.



Lightning whelk shell artifacts from Southwest Florida. Top row, left to right: Type A cutting-edged tool, Adze, Type D hammer, Type F hammer. Middle row, beginning at lower left: Hammer/pounder, saucer, Type C hammer. Bottom center, upper: Columella cutting-edged tool. Bottom center, lower: Columella hammer; Lower right: Shouldered adze. (Photo by Kristen Grace.)



The lightning whelk. (Photo courtesy Bailey-Matthews National Shell Museum.)

Tens of thousands of lightning whelk shells are found along with other debris in southwest Florida middens, their fleshy parts having been eaten by people, in many cases several hundred years ago. The whelks were gathered from nearby shallow-water estuaries. Although fish contributed the great majority of the protein intake for the Calusa, shellfish were always important. Sometimes the Calusa used whelk shells for making tools. They selected only the larger and thicker individuals for this purpose.

But in places far from coasts, where lightning whelks do not live naturally, the whelk shells had special ritual significance. Artifacts made from them were included with human burials between 6,000 and 3,000 years ago, especially in western Kentucky, northern Alabama, and western Tennessee. Beads, drinking vessels, pendants, gorgets (decorative items worn at the neck), and other items were made from lightning whelk shells, which came from the Gulf of Mexico, some 500 miles away.

Perhaps the best known lightning-whelk artifacts are gorgets and drinking vessels made in the Southeast between 500 and 1,000 years ago. Most gorgets are circular, with two suspension holes near the edge. Some gorgets show a rattlesnake in a coil with its head near the center. The head of the snake is sometimes indicated as a series of concentric circles, with smaller sets of concentric circles elsewhere on the body and a distinctive rattle at the tail. More than 90% of all known rattlesnake gorgets show the snake moving in a sinistral spiral.

The two of us recently published a paper in which we show evidence that the spiral is a metaphor for the continuity and inevitability of time, with references to cycles of birth, death, and rebirth, and the triumph of sun/fire over darkness/death. You can read this paper in the RRC library in the Ruby Gill House, or find the article on line or in a university library (see reference below).

Historical accounts of more recent Indian people in the southeastern U.S. show that sinistral (clockwise) spirals are associated with the sun and its movement. Fire represented sun on the earth. For example, among the Creek Indian people in

## Smith Mound and Encircling Canal are Revealed

*New Area to Open to the Public in Spring, 2017*

by Cindy Bear

**As reported** in our June newsletter, invasive plant removal on the land parcels holding the Smith (burial) and Low (midden) Mounds commenced in May. The clearing work was funded in large part by the Felburn Foundation, and we are most grateful for their support. Additional funds came from our operations fund, which is made up of donations and dues from our members. Thank you!

Past disturbances, including those from agriculture and Hurricane Charley, created conditions that led to a dominance by non-native plant species. Over the course of two weeks, crews delicately used heavy equipment, chain saws, and hand tools to reveal unique features and free native vegetation. The photo (top right) was taken while facing west at the flank of the Smith Mound on the opposite side (to the east) of where visitors currently stand behind the fence on the Calusa Heritage Trail to view the mound. The arrow is pointing to a Pond-apple tree, a native with edible fruit, that was struggling to survive under the dense Brazilian pepper canopy. To the left of the Pond-apple stands an Australian pine identified here by its lighter colored bark. Australian pines are known for allelopathy: their fallen leaves exude chemicals that inhibit the growth of other species. Look carefully at the base of the Pond-apple and you will see a portion of the Calusa-dug waterway that once encircled the Smith Mound.

As the work proceeded, more of the waterway was revealed. The large stump in the foreground of this photo (bottom right) is from a Java Plum. This exotic grows up to 50 feet tall and its canopy can be equally wide. It quickly overwhelms native trees on which Florida wildlife is dependent. Although much work had



been accomplished when this photo was taken, the Smith Mound contour and terrain were still engulfed and hidden. However, the Pond-apple tree was capturing more sunlight and beginning to recover.



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Wow, there it is! This photo (below) shows the Smith Mound revealed, on the right, and the Calusa-dug waterway holding water. Because this photo was taken from a different perspective, the Pond-apple tree is hard to see.



Finally, and, from a little more distant vista, this photo (below) shows native oak trees and cabbage palms that survived the exotics. The Smith Mound and waterway can be seen to the right.



We look forward to members and visitors seeing this area; however, access is not yet possible. Fencing will start in late September. All material dug from every fence post hole will be screened for artifacts, and soil profiles will be examined in order to add to our information about the site and be certain we avoid particularly sensitive areas. There is already regrowth of some exotic vegetation and this will require on-going attention. New growth of native plants, including a lovely coontie (*Zamia*) that sprouted and is growing rapidly near where this photo series was shot, are changing the landscape too. As late summer rains continue, soils will become saturated and water will pool in low spots. At that time we will determine the best places for trails and benches. The first public tours of the area will take place at Calusa Heritage Day, March 25, 2017, and access for self-guided visits will follow. 🏺

## Summertime, Summertime



Adults, from left to right: Jim Niehaus (ACA Certified Kayak & SUP Instructor, Florida Master Naturalist & H2O Kayak Adventure Camp Program Coordinator), Blake Sanders and Timon Braun (High School volunteer camp counselors); student participants, left to right: Sebastian Murphy, Trip Edwards, Tyler Anson, Brody Murphy, Brady Lavenia, Cole Murphy, Evan Tichy, Blake Lavenia, Kaden Chandler, Grace Dahlstrom. (Photo by Diana Stockbridge.)

**While learning to paddle** a canoe and navigate estuary waters was part of daily life for Calusa children, the best opportunity for today's youth to learn those skills is often at summer camp. This year Gulf Coast Kayak (GCK) of Matlacha hosted six weeks of camps that included visits to the Calusa Heritage Trail. GCK was supported in their mission to help youngsters gain knowledge and appreciation of the estuarine environment and learn water safety through a grant from the Florida Paddling Trail Association which in turn received funds from Outdoor Nation/Paddle Nation. Those funds sponsored 11 campers, many of them Pine Island children, throughout the 6 weeks of camp. Diana and Brian Stockbridge, GCK owners, and Jim Niehaus, guide and instructor, are graduates of the Florida Master Naturalist Program's Coastal Module taught by Cindy Bear at RRC. Cindy is a past owner and co-founder of GCK and Jim volunteers at RRC, creating a unique legacy partnership supporting the RRC's mission. We look forward to more innovative community partnerships and to seeing these young estuary enthusiasts on the water! 🏺

### The Plant World of the Calusa: A View from Pineland

Written and illustrated by  
Martha Kendall  
Edited and with a foreword by William Marquardt



To learn more about the native plants used by the Calusa Indians who lived at Pineland, including the Pond-apple, oaks, cabbage palm, and coontie mentioned in this article, see Martha Kendall's *The Plant World of the Calusa: A View from Pineland*, available in the RRC gift shop.





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Sincerely,

William H. Marquardt  
 Director  
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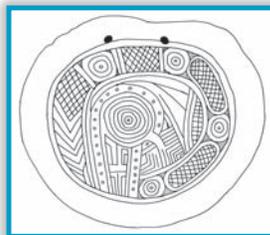
### Continued from page 1

the late 1700s, William Bartram observed a council meeting in which a fire had been laid in a sinistral spiral around the central pillar of the council structure. Lit from the exterior end, it burned slowly but

steadily “with the course of the sun,” until the fuel was consumed. For Creek people, the sinistral spiral represented the daily path of the sun and traced the direction of life, from birth toward death, imitating how the sun is born in the east and dies in the west each day. A similar council fire spiraling around a central post was a feature of the Cherokee council house.

Spirals also take on ritual significance in community dances. The most frequent dance direction among the tribes east of the Mississippi River was counter-clockwise. Certain dances were performed only by men, others only by women. Most southeastern dances were named after animals. Some animals named in dances were associated with the path toward death, as were warriors. Others were associated with the path toward life, as were women. Some animals received special attention because they were important foods. Two animals in particular—snakes and owls—were associated with illness or death.

Legends indicate that snakes are capable of dealing death, often tricking or trying to kill people. Southeastern peoples avoided killing snakes in order to avoid retribution from other snakes. Rattlesnakes typically coil in a spiral with the head in the center. This further associates snakes with the spiral, death, and war, as in the Cherokee Warrior's



Drawing of rattlesnake gorget, Ledford Island site, Tennessee, made from outer whorl of large lightning whelk shell. Note rattle at left; snake moves clockwise (sinistrally), with head in center, indicated by concentric circles. (Image courtesy McClung Museum of Natural History and Culture.)

Mask, which has an image of a coiled rattlesnake on top of the warrior's head.

Snake and Owl dances are both clockwise and counter-clockwise. The most detailed description of the Snake Dance is from the Cherokee, but it also occurs among the Choctaw, Alabama, and Chickasaw. Participants first dance counter-clockwise toward the center, forming a spiral. At the center, they reverse direction and file outward in a clockwise direction. Then they move to another part of the dance ground and dance into another spiral, this time clockwise toward the center, and again reverse their steps in a counter-clockwise spiral. The Horned Owl dance among the Creek was performed in a similar manner, and was always in September. In the longer paper, we bring several lines of evidence

to bear on these interpretations, demonstrating, we believe, the significance of the sinistral spiral in Native American symbolism, and the role of the lightning whelk in representing that spiral.

Lightning whelk artifacts are found in archaeological sites from Florida to Manitoba, Canada, and from Oklahoma to New York State, and almost all of them came from the shores of the Gulf of Mexico. Beautiful though they are when fresh, and useful though they were to the Calusa for food and tools, we think it is neither color, nor size, nor ease of acquisition that motivated Indian people to seek out lightning whelks for artifacts. It is the specific left-handed (sinistral, clockwise) coiling direction that makes this whelk so valuable and sacred outside of Gulf coastal Florida. In short, the sinistral spiral was an icon of eastern Native American spirituality, and the lightning whelk served as a physical reminder of this very important principle. 🐍

Marquardt, William H. and Laura Kozuch (2016)  
The Lightning Whelk: An Enduring Icon of  
Southeastern North American Spirituality.  
*Journal of Anthropological Archaeology*,  
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## RRC News

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