



**WMS/LSS ARCHAEOLOGICAL SOCIETY NEWSLETTER**

**Vol. 33, No. 4 SEPT/OCT 2022**

*A 501(c)3 Corporation and Chapter of the Florida Anthropological Society*

The Warm Mineral Springs/Little Salt Spring Archaeological Society meets the second Tuesday of the month at 7:00 PM (except June, July and August). The September 13th meeting will be a hybrid live/Zoom. We will meet in person at the North Port Community United Church, located at 3450 S. Biscayne Blvd. We will also conduct via Zoom as well, the link below. We will meet prior to at the Tarpon Pointe Grill and Marina in North Port at 5pm. Please attend! The September 13 meeting Zoom link is: <https://us02web.zoom.us/j/81385845571?pwd=S21VUTVzQU9OK1NPNTUzOTQxc2ZNQT09>  
Meeting ID: 813 8584 5571 - (Passcode): 883533 or Join with Google Meet: [meet.google.com/xhm-pnsg-ood](https://meet.google.com/xhm-pnsg-ood)

**WHAT SITES DO WE SAVE? A CASE STUDY ON PRIORITIZING CULTURAL SITES FROM COLLIER COUNTY, FLORIDA- TOPIC OF SEPTEMBER 13th; SPEAKER RACHEL KANGAS**

This presentation will cover a project in Collier County, FL, that devised a system for prioritizing cultural sites based on when they are likely to flood due to sea level rise, how vulnerable they are to flooding, and the consequences if the sites are lost. Hopefully, this project will start more discussions about how sites should be prioritized, and what matters when it comes to deciding where to invest limited resources.

Rachael Kangas, M.A., RPA is the Regional Director of the West Central & Central Regions Florida Public Archaeology Network, and she conducts public archaeology and outreach in the regions.



September 13th speaker, Rachael Kangas

**THE LEGEND OF GASPARILLA- TOPIC OF OCTOBER 11th; SPEAKER CRYSTAL DIFF**

Legend of Gasparilla - Dive into the legend of the infamous pirate Gasparilla, and the lasting impact it has made on southwest Florida's coast. While exploring the local origins of the legend, we'll uncover the historical background of how a "big fish" story captured a railroad tycoon, and made its mark on our coast forever.

Crystal Diff is the Executive Director for the Boca Grande Historical Society. She has spent over a decade working with cultural institutions across southwest Florida in history, art, archives, anthropology, and archaeology. Previously to the BGHS, she provided public education programs and exhibits for Charlotte County History Services and was co-founder of our local International Archaeology Day event in SW FL.



October 11th speaker, Crystal Diff

## Rachael Kangas Continued from page 1

Ms. Kangas earned her M.A. from the University of Central Florida (UCF) in 2015, and is certified as a member of the Register of Professional Archaeologists (RPA). She has participated in fieldwork in the Americas, and conducted lab work and teaching during her time at UCF. She is also an American Academy for Underwater Sciences (AAUS) diver, allowing her to assist with underwater research around the state. Her specialties include Florida archaeology, public archaeology, and archaeological illustration.

## FROM THE WMS/LSSAS PRESIDENT, KATHY GERACE

A BIG WELCOME! As we begin our 2022/2023 year, I want to welcome you to the Warm Mineral Spring/Little Salt Spring Archaeological Society. We have a wonderful Board of dedicated individuals, so plans are underway to provide you with great monthly speakers, who can be heard at our in-person meetings or via Zoom. We are also planning special and exciting field trips in which we hope you will consider taking part. We live in an area with its own unique past, and we want to share it.

We hope you can join us in person at our September 13 and October 11 meetings. We would like to kick off the season by seeing familiar happy faces again! Face masks are optional and social distancing should not be a problem for those who still have concerns, and we will also provide the meeting via Zoom. Please see the cover page to meeting location and Zoom link.

## FLORIDA ICE AGE (PLEISTOCENE) MAMMALS- TOPIC OF MAY 10th ZOOM MEETING; SPEAKER DR. BRUCE J. MacFADDEN

By Judi and John Crescenzo

On May 10, 2022, Dr. Bruce J. MacFadden presented "Florida Ice Age (Pleistocene) Mammals" via Zoom. Dr. MacFadden is a professor at the Florida Museum, Director of the University of Florida Thompson Earth and Support Institute (TESI), and is an accomplished researcher in vertebrate paleontology. He earned his Bachelor's degree from Cornell, and a PhD in geology from Columbia, where he focused on paleontology.

The Pleistocene in Florida occurred 2.5-3 million years ago, causing fluctuations in temperature from warm to cold, but Florida probably never experienced ice and had very little snow. Glacial fluctuations caused changes in sea level and climatic cycles, leaving behind numerous fossils. The highest concentration of fossils is in the Peace River, which is the best place for collecting. The Leisey Shell Pit, which is made up of mangroves and swamp, located south of Tampa near Ruskin, is another good place to collect fossils. The third best place to find 2 million year-old fossils is in an ancient sinkhole west of Gainesville.

Megafauna are animals weighing more than 100 pounds. Pleistocene megafauna in Florida came from three sources: Native species, immigration from the Old World, and through the Isthmus of Panama, which once allowed for passage between

South and North America.

Megafauna in Florida 2 million years ago included the giant ground sloth, antelope-like mammals, giant birds, hyena, zebra-like animals, horses, mastodons, and condor-like birds. The mastodon originated in North America 5-6 million years ago, and resided throughout the Americas. *Camelops* (extinct by the end of the Ice Age) and llamas migrated south to the Andes. Tapir and deer remains indicate that there were forests at that time. The *Smilodon*, the giant saber-toothed tiger, and the Dire Wolf, a native mammal, were the carnivores at the top of the pyramid. Saber-toothed tigers had huge canine teeth to pierce the flesh of mastodons, mammoths, and perhaps large bison and horses. Dire wolves probably hunted in packs and were much larger than modern timber wolves.

When it was cold and sea level was low, there was a shallow shelf called the Beringian land bridge from Siberia, Russia, to Alaska. Mammoths with huge, curved tusks had already immigrated across the land bridge by this time. The largest were the woolly mammoth and the Columbian. The Woolly Mammoth had thick curly hair, but the Columbian Mammoth had short hair, and thrived in Florida. The niche theory explains why the mastodon and mammoth were able to co-exist even though they were competitors. Although both require large quantities of food, they ate different types of vegetation. Mastodon teeth were made for grazing, while mammoth teeth were designed to cut like scissors or crush nuts. Giant bison were about twice as big as today and had enormous horns. Their arrival may have precipitated the extinction of the original North American *Equus*. *Bison antiquus* went extinct, but a smaller species, *Bison bison*, survives today on ranches and farms across North America.

Megafauna immigrated from South America during the Great American Biotic Interchange (GABI), when volcanic islands of South and North America joined the continents. Animals came to Florida from South America about 2,500,000 years ago. The Terror Bird, or *Titanis*, was a dominant predator that ate flesh. It had tiny wings and could not fly, but it could run fast. Giant ground sloths migrated during at least seven events, each involving different types of sloths from South America. All became extinct by the end of the Pleistocene, because they thrived in a more temperate climate. The *Megalonyx* was a relative of the modern two-toed sloth, *Choloepus*. Modern armadillos have ancestors in South America. They were introduced northwards several times when the climate was conducive. The Ice Age armadillo was half the height of a human. The *Glyptodon*, a cousin of the armadillo, had a massive, armored carapace, fed on leafy vegetables, and grazed on grass.

By the end of the Pleistocene, 2 million years ago, cycles of extinction had wiped out the megafauna. One explanation is that whenever climate changed, many species of plants died. Specialized herbivores could not adapt to eating other plants. Horses came to America 2,500,000 years ago. When bison arrived and grazed, *Equus*, went extinct in North America through the ecological pressure and resource competition, but were later reintroduced by the Spanish. Many weakened animals also became food for terror birds. The overkill

hypothesis states that humans came to Florida about 15,000 – 20,000 years ago, and when they over-hunted an already-stressed species, this caused extinction of some, such as mammoths. This would have caused adverse chain reactions in the populations of both their predators and prey. Paleontology and Florida fossil records provide an understanding of the biodiversity which existed in ancient Florida. The combined forces of resource competition, climate cycles, and overkill likely contributed to the extinction of many species of megafauna.

For further information and to receive a newsletter, visit the Thompson Earth Systems Institute at [bit.ly/TESInews](http://bit.ly/TESInews).

## FIELD TRIPS

Our first field trip planned for the Fall season will be held October 15, 2022. We plan to travel to Punta Gorda for a walking tour of the Punta Gorda murals led by Punta Gorda Mural Society president Kelly Gaylord. A \$10 donation is humbly suggested to assist in efforts of the PGMS, a 501(c)3 non-profit organization, of bringing historically interpretive murals to Punta Gorda.

You can sign up for our October 15th field trip at the September and October meetings, or please send an email to WMSLSSAS president Kathy Gerace for where to meet and lunch options at: [dtgerace@gmail.com](mailto:dtgerace@gmail.com).

For more information on the Punta Gorda Mural Society and to see some murals, go to: <https://puntagordamurals.org/murals/>

Other field trips under consideration for the fall and winter of the 2022/2023 season include Egmont Key, Useppa Island, and Randell Research Center. More information will be in the November/December WMSLSSAS Newsletter.



*Building a Community, one of the many panels of murals within walking distance in downtown Punta Gorda, Florida.*

## LITTLE SALT SPRING NEWS

### *Sacoila lanceolata* var. *paludicola* ORCHID STUDY CONTINUES AT LSS

By Steve Koski

On Friday, September 2, 2022, Dr. Tatiana Arias, orchid research biologist with Marie Selby Botanical Gardens, made a visit to LSS with three students, Sarah Wetterer with the Florida Atlantic University Orchid Laboratory, Fernando Rocha, a graduate student at Northwestern University, Chicago, and John Gang, a New College of Florida undergraduate student. All are orchid specialists. They came to examine the distribution of a



The Marie Selby Botanical Gardens orchid Crew, from left to right: Fernando Rocha, Sarah Wetterer, John Gang, and Dr. Tatiana Arias.

and recover leaf samples for DNA analysis, to conduct a comparative study with other known populations of *S. var. paludicola*, and the species *S. lanceolata*.

The species and the variety grow in distinctly different habitats, have different blooming cycles, and have observable morphological differences. One aspect of the DNA studies will help determine if those differences indicate *S. var. paludicola* is a separate species of *Sacoila*, and not just a variety.

The population was discovered by biologist Craig Huegel and Kat McConnell during a plant inventory on the +/- 112- acre LSS property in 2008, resulting in the publication in *The North American Native Orchid Journal*: 'General Notes on the Ecology of *Sacoila paludicola*, Sarasota County, Florida,' by Craig N. Huegel, and Kathleen K. McConnell.

The University of Miami and Marie Selby Botanical Gardens entered into an informal collaboration in 2019 to study the orchid. Dr. Antonio Toscano began the study, but suffered a medical complication shortly after, resulting in his inability to continue. Nancy Morrison, a Friends of Little Salt Spring board member and a member of the Sarasota Orchid Society, reached out to Dr. Arias, who made a site visit during the April *paludicola* bloom, and became interested in continuing the study. Mr. Rocha and Ms. Wetterer saw posts on the subject on the Friends of Little Salt Spring's Facebook page and contacted Dr. Arias. They have taken leaf samples from both *S. lanceolata*, and *S.l. var. paludicola* from the east coast of Florida to complement the study. Mr. Gang became involved as a local, interested student who contacted Dr. Arias at Selby, so there is now quite a diverse team of knowledgeable individuals and orchid enthusiasts involved in the study.

To sequence the DNA of the orchids will cost an estimated \$9,000. The Friends of Little Salt Spring have an initial pledge of \$3,500, and are actively raising additional funds. Other potentially interested partners are being sought as well.

If you would like to contribute to the LSS orchids study, please contact the president of the FLSS, Bill Goetz, at: [billgoetz3339@gmail.com](mailto:billgoetz3339@gmail.com). 100% of the funds pledged to the UM/Selby LSS Orchid study will go toward the DNA sequencing and LSS orchid research expenses.

## SCIENCE DIVE CLASSES VISITING LSS IN OCTOBER

By Steve Koski

For four weekends in October, the University of Miami Dive program will be bringing students to LSS for advanced science dive training. All students are trained and certified divers of many experience levels, but technical science dive training provides the specialized training required to do underwater science within their particular fields.

Dr. Gifford used UM-trained science divers for his LSS field underwater field research, as will underwater archaeologist Dr. Fredrick Hanselmann, who is now preparing for the upcoming underwater archaeology field session at Little Salt Spring.

UM has taken a renewed interest in the archaeological and ecological preserve, and is providing more support for research and science dive training, thanks to Executive Vice President and Provost Dr. Jeffery Duerk and Dean Roni Avissar

## HELPFUL LINKS TO RECOGNIZE ARCHAEOLOGICAL MATERIALS

Compiled by Michelle Calhoun

In Florida, we are surrounded by a (rapidly disappearing) plethora of archaeological sites representing the lives, livelihoods, and technological achievements of the peoples who came before us. Cultural items of these peoples are found on the surface, beneath the ground where we stand, and underwater. We should always strive to be excellent stewards of history and report and protect the important sites we encounter. One should only participate in archaeological investigations under the direction of academic or cultural resource management endeavors. Once a site has been disturbed, its valuable insights can never be recreated, and important information is lost forever.

However, we should know more about what we may observe in order to know what to protect. Here are some helpful sites to aid in identification of shark teeth, projectile points, shell tools, Historic and Native ceramics, artifacts, and much more.

### 1) [Projectile Point Identification Guide \(projectilepoints.net\)](http://projectilepoints.net)

According to their website, "This is the most comprehensive on-line identification guide. In addition to all points' general distributions shown, most points have detailed distribution descriptions, so you know where points are commonly found. Every point is searchable nationally, regionally, and by specific state which gives you the flexibility to identify points." They also provide a lithic (stone tool) database that provides descriptions of the distributions of lithic types and their quarry locations.

### 2) [Pottery Types Gallery – Ceramic Technology Lab \(ufl.edu\)](http://ufl.edu) & [Bibliography of Florida Pottery Type Descriptions – Ceramic Technology Lab \(ufl.edu\)](http://ufl.edu)

Also from the University of Florida is the Pre-Columbian pottery type database. It provides a keyword search box that lets you search by type, location, surface treatment, chronology/cultures,

and paste/inclusion types. A helpful bibliography for literature on FL Native ceramic identification is also provided.

### 3) [Home \(peachstatearchaeologicalsociety.org\)](http://peachstatearchaeologicalsociety.org)

This website has many attractive features. It provides artifact identification, relevant publications, sites to visit, cultural histories, primitive skills tutorials, and site survey reports. In the artifact ID section, you can search by ground stone tools, projectile points, pipes, beads, apparel, basketry, bone tools, shell tools, effigy figures, game stones, European trade goods, flaked stone tools, pottery, ceremonial symbols & objects, wooden artifacts, and metal objects (such as copper, silver, gold, and galena). Primitive skills featured are flint knapping, small scale lithic thermal alteration, fire building, bow drills, pottery-making, and salt collecting.

### 4) [Digital Ceramic Type Collection – Historical Archaeology \(ufl.edu\)](http://ufl.edu)

This website, curated by Dr. Charles Cobb at the University of Florida, is a "fully searchable digital resource" of Historic period ceramics from 1492-1850.

### 5) [A Guide to Recent Shark Teeth \(elasma-research.org\)](http://elasma-research.org) & [A Guide to Fossil Shark Teeth \(elasma-research.org\)](http://elasma-research.org)

The ReefQuest Centre for Shark Research's website has been quite helpful in identifying shark teeth and even provides a link to other helpful websites for shark research.

## 2022 WMS/LSSAS OFFICERS

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