Southwest Florida Archaeological Society (SWFAS)
OUR 46th YEAR
April 2026 Newsletter

https://swflarchaeology.org/

PRESIDENT'S CORNER *By John F. Furey M.A., RPA,* jffurey@charter.net

Southwest Florida is the Calusa Coast

Be sure to join us April 15 in Bonita Springs to learn about fossil shark teeth and those found on archaeological sites. See below.

The report of the 2025 International Shark Attack File located at the University of Florida has been released and, while US attacks are down, more than 50 percent of all incidents were in the United States. Florida led the U.S. with 11 of the attacks and Volusia County Florida had more than 50 percent of all the attacks and continues with the title of "Shark Bite Capital of the World".

The 78th Annual Florida Anthropological Society meeting will take place next month in Punta Gorda, Florida on May 8-10 at the Charlotte Harbor Event and Conference Center on the Peace River. The hotel is the Four Points Sheraton Punta Gorda. The meeting is sponsored by the Warm Mineral Springs/Little Salt Spring Archaeological Society (WMSLSSAS) of Sarasota and Charlotte Counties. With it so close to Lee and Collier Counties this is your opportunity to attend a conference and make your reservations early. Go on the FAS website at https://fasweb.org/ to sign up. Chapter members wishing to volunteer should contact event organizers.

RECENT RESEARCH

MEGALODON SHARKS: WHAT WAS THEIR DIET? A NEW WAY OF TESTING!

Related to Great White sharks, Megalodon sharks were huge. They were estimated to be 52 to 80 feet long (16-24 meters) with teeth as big as your hand, seven inches long (18 cm.), and weighed between 65,000 to 143,000 pounds (30,000-65,000 kg.). Scientists have long assumed that they must have eaten large prey such as whales and other large sea mammals as a mainstay of their diet. Recent discovery of the presence of low levels of zinc 66 and zinc 64 isotopes in megalodon fossil teeth, isotopes that are ingested with their food, differed little from those species further down the food chain. This indicated that Megalodon had a wide-ranging diet that included fish and did not have a diet solely of large marine mammals. Source: *Earth and Planet Science Letters at https://www.sciencedirect.com/science/article/pii/S0012821X25001918* .

FORGOTTEN MAYA QUEEN'S NAME REVEALED THROUGH HIEROGLYPHS

Researchers at the University of Texas at Austin and the Instituto Nacional de Antropologia e Historia (INAH) in Mexico City have deciphered a Mayan hieroglyph with the name of a sixth century Mayan queen. Queen Ix Ch'ak Ch'een ruled the city of Cobia, A female ruler was very rare. The discovery came from an inscription on the "Foundation Rock" limestone slab and offers insights into Cobia's political and spiritual history. Source: *Smithsonian Magazine at https://www.smithsonianmag.com/smart-news/archaeologists-decipher-crumbling-hieroglyphs-to-reveal-the-name-of-a-forgotten-mayan-queen-who-ruled-1400-years-ago-180987582/* .

SWFAS DUES REMINDER 2026

SWFAS dues for 2026 are due. Thanks to everyone that has already renewed their 2026 tax deductible membership. Your support of archaeology, history, preservation, and education in Southwest Florida is critical. Our sole source of revenue is your dues and your gifts as we strive to offer educational programming in the area of archaeology and history free to all members of the public. SWFAS is a 501(c)(3) registered non-profit organization. Donations and gifts to SWFAS in December are tax deductible and benefit us both. Thanks to everyone that has already renewed their 2026 tax deductible membership. If you have not done so, we have two ways, you can renew online with a credit card at https://swflarchaeology.org. On the Home page, go to " Select Member Level" and then " Add to Cart." Or send a check to: Charlie Strader, SWFAS Treasurer, 27655 Kent Road, Bonita Springs, FL 34135. If you have question re membership status, you may call/text Charlie at 239-992-6133.

SWFAS PRESENTATION SCHEDULE 2026

Note that all SWFAS presentations are free to the public
Also note that newsletters will be distributed each month except June - September

APRIL 15, 2026, 7:00 PM, BONITA SPRINGS, BONITA SPRINGS FIRE STATION 24
Dr. Harry Maisch IV, Instructor, Florida Gulf Coast University
Topic: Fossil Shark Tooth Identification and Preservation

MAY 8, 9, and 10, 2026 **Florida Anthropological Society ANNUAL Meeting at Punta Gorda**
See website at https://fasweb.org/ for information

JUNE – OCTOBER – SUMMER SABBATICAL

NOVEMBER 18, 2026, 7:00 PM, BONITA SPRINGS FIRE STATION 24
Presentation: TBA

DECEMBER 5 OR 12, 2026 **Field Trip: TBA**

MARCH PRESENTATION - *IRELAND: A SACRED ISLAND BEFORE CHRISTIANITY*

SWFAS was treated to a wide ranging presentation on Ireland and the orgins of the early pre and post Christian beliefs that reached the island. It was also on the day after the celebration of Saint Patrick's Day. Alf began with the ancient cultures and belief systems of the Middle East, from early animism of hunter-gatherers, earth and sun gods and goddesses of early herders and traders, Polytheism of the Iron Age, and Monotheism of Judaism, Christianity, and Islam. The migration waves of these belief systems traveled through Europe by sea, and later, by land, made it to Ireland, and they left traces in their wake along these coastal routes. We see examples of them in henges, megaliths, barrow mounds, and other archaeological evidence left behind. The early discovery of copper resources in Ireland brought miners and metal working to Ireland and establishing wide trade networks greatly changed these early Irish cultures. Today, DNA evidence has uncovered much about these early Irish people that is still found in today's population, and many ancient cultural themes are also present. For those of you who missed this presentation, you can hear Alf speak about Monastic Ireland on April 8th from 1-2:30 pm at FGCU Campus , Bldg. AB9. To register, go to https://fgcuacademy.asapconnected.com/#EventID=2935789 .

APRIL PRESENTATION: WEDNESDAY, APRIL 15, 2026, 7:00 PM

BONITA SPRINGS, FIRE STATION 24

FOSSIL SHARK TOOTH IDENTIFICATION AND PRESERVATION by DR. HARRY MAISCH, IV

Join us at Bonita Springs Fire Station 24 to learn about fossil shark teeth. Sharks are well represented in the geologic record over the last 100 million years from isolated teeth preserved in ancient marine deposits. Many archaeological sites in Florida have both fossil and modern shark teeth and as apex predators, shark teeth are the most common vertebrate fossils collected in the world, and they have been used as curiosity items, tools, and symbols of wealth, among other purposes, for thousands of years.

Dr. Harry Maisch is an Instructor in the Department of Marine and Earth Sciences in The Water School at Florida Gulf Coast University. He earned his Master's and Ph.D. degrees in Earth and Environmental Science with a focus on geology and paleontology from the City University of New York at Brooklyn College and The Graduate Center. Dr. Maisch's research primarily focuses on Cenozoic shark and fish paleontology from the Atlantic and Gulf Coastal Plains of the United States. The fossils he has collected on land and while SCUBA diving at various locations around the USA have unique geologic histories that are important for addressing climatic and sea-level changes over geologic time. Much of his current research focuses on the paleontology and geology of central and southwestern FL.

DIRECTIONS TO THE BONITA SPRINGS FIRE DEPARTMENT STATION 24

Located at 27701 Bonita Grande Dr, Bonita Springs, FL 34135, turn off of I-75 at the Bonita Springs interstate Exit 116 (CR-865) to the East opposite the beaches. Go for 0.7 mi. Turn left onto Bonita Grande Dr at red light (Publix and Racetrack). Go north for 0.3 mi. Turn East onto Snell Lane to the entrance. The parking lot is well lit. Bonita Grande Dr. may also be accessed from West Terry St.

ARTICLES - *Preview*

WAS THE EMERGENCE OF INTELLIGENT LIFE ON EARTH JUST A FLUKE?

In 1983 physicist Brandon Carter devised the "hard steps theory" of the emergence of intelligent life on earth. Many improbable conditions had to happen for biological and evolutionary processes to emerge and, while many were long shots, it did happen. Is there a real universal predictable evolutionary path that unfolds as global conditions allow or were they flukes? See below.

HUMANS DEVELOPED LANGUAGE CAPABILITIES 135,000 YEARS AGO: RESEARCHERS STUNNED TO FIND SIMILARITIES IN 7,000 LANGUAGES.

A recent study claims that the genetic makeup for language came into being about 135,000 years ago. These experts believe that language was the catalyst that acted as a trigger for advances by the nonlinguistic early H. sapiens in tool making and cultural development. They also found that 7,000 human languages have similarities in their construction that implies they had the same roots. See below.

HOMO ERECTUS THRIVED IN A DESERT, STUDY FINDS, SUGGESTING THAT EARLY HUMANS COULD ADAPT TO EXTREME ENVIRONMENTS

An article in the 2025 December SWFAS Newsletter explained that the Sahara was green from 11,000-5,000 years ago. A new study finds that prior to that, Homo erectus was living in tropical forests as the marginal areas of East Africa dried out, hunting, gathering, and making primitive stone tools. See below.

ARTICLES

WAS THE EMERGENCE OF INTELLIGENT LIFE ON EARTH JUST A FLUKE? SOME SCIENTISTS THINK NOT

By Will Dunham
February 14, 2025
From Reuters at https://www.yahoo.com/news/emergence-intelligent-life-earth-just-191411645.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuYmluZy5jb20v&guce_referrer_sig=AQAAAHJnzboonJUZLQz8QT3TGVjpwaDl9ULkxLQQAoqyMKPfDW_xgdOn7lDbnEh46ga4Fqha05H79OHUaizauhC_RKIAfr0T82Lq3U2ozIVnLoT-tXAiIhlVtld9Fcq5FVkgENU4Ln6ZP_sjnMyxbrcZkA-ID2Noxzlcd2v8CG4egjoA

Roughly 300,000 years ago, our species first appeared on the African landscape before spreading globally and coming to dominate the planet. All this happened about 4.5 billion years after Earth formed, with innumerable steps occurring in between that made our planet a cradle for intelligent life. An influential scientific thesis - called the "hard steps" theory and first presented in 1983 - has held that this outcome was a long shot and that the emergence of technological-level intelligent life on Earth or elsewhere was highly improbable. But perhaps this result was not so unlikely after all, according to scientists who are now advancing an alternative theory.

These scientists propose that Homo sapiens and analogous extraterrestrial life forms may be the probable end result of biological and planetary evolution when a planet has a certain set of attributes that make it habitable, rather than requiring countless lucky breaks. The path toward intelligent life, they argue, may be more of a predictable process, unfolding as global conditions allow in a manner that should not be considered unique to Earth. "In short, our framework shows how hard steps may not actually exist - past evolutionary transitions that needed to happen for us humans to be here may not have been hard or unlikely in the available time," said Dan Mills, a postdoctoral researcher in geomicrobiology at the University of Munich and lead author of the study published on Friday in the journal Science Advances.

Physicist Brandon Carter devised the hard steps theory. It stresses that the long road to the emergence of humankind necessitated passage through various intermediate steps, each highly unlikely. Over the years, scientists have tried to identify some of these hard steps. These include the emergence of single-celled living organisms on primordial Earth, the initial oxygenation of the atmosphere by photosynthesis, the evolutionary transition from prokaryotic cells that lack a nucleus and other internal structures to eukaryotic cells that have them, and the appearance of complex organisms such as multicellular animals. And then, the final proposed hard step is the appearance of Homo sapiens and milestones such as language and technology.

A species with advanced technological capabilities emerged on Earth relatively late in the Earth's habitable history, with the sun expected to increase in luminosity and boil away our planet's oceans about a billion years from now. This has inspired the argument that Earth is an incredibly rare planet that managed to accomplish the needed hard steps before becoming rendered uninhabitable.

The new theory was devised by a team of two geobiologists and two astronomers. They propose that humankind's emergence followed the sequential opening of various "windows of habitability" over Earth's history, driven by factors such as changes in nutrient availability, sea surface temperatures, ocean salinity levels and atmospheric oxygen levels. Due to these factors, Earth only relatively recently became hospitable to a species like ours, they said, and that once those conditions existed the evolutionary path was relatively rapid. "Biological innovations proposed as hard or unlikely might actually occur quickly - geologically speaking - as soon as the environment permits," said Penn State microbiologist Jennifer Macalady, one of the researchers. "For example, life might have originated very quickly once temperatures were appropriate for the stability of biomolecules and liquid water. The Earth has only been habitable for humans since the second rise of oxygen in

the atmosphere approximately 0.5 billion years ago, meaning that humans could not have evolved on Earth prior to that relatively recent moment," Macalady added.

Astronomers are searching for evidence of life beyond Earth and have identified roughly 5,800 exoplanets - planets beyond our solar system. Some of them are uninhabitable gas giants akin to Jupiter but some of them are rocky worlds like our solar system's four terrestrial planets that include Earth. Astrophysicist and study co-author Jason Wright, director of the Penn State Extraterrestrial Intelligence Center, said that a best estimate right now is that somewhere around half of stars have a planet about the size of Earth orbiting at about the right distance to host liquid water, a key ingredient for life. "Understanding the probability of intelligent life emerging helps us understand our own place in the world," Mills said. "Are we humans a cosmic fluke, as the hard steps model predicts? Or are we instead the more expected and typical outcome of a living planet, as our alternative framework suggests?"

CRUCIAL FEATURE OF HUMAN LANGUAGE EMERGED MORE THAN 135,000 YEARS AGO
By Tessa Koumoundouros
March 18, 2025
From Science Alert at https://www.sciencealert.com/crucial-feature-of-human-language-emerged-more-than-135000-years-ago

Humans speak more than 7,000 languages today. As different as they all seem, researchers argue in a new review that they all stem from a single linguistic family tree that emerged before our species split into distinct populations 135,000 years ago. By 100,000 years ago, this verbal revolution was cemented into the behavior of Homo sapiens, archeologically visible in our use of symbolism in body decorations and engravings. "Every population branching across the globe has human language, and all languages are related," says MIT linguist Shigeru Miyagawa. "I think we can say with a fair amount of certainty that the first split occurred about 135,000 years ago, so human language capacity must have been present by then, or before."

Miyagawa and colleagues reviewed the scientific literature and found 15 studies that reach the same conclusion in spite of using different methods. Whole-genome, Y chromosome, and mitochondrial DNA analyses all point to Homo sapiens first fracturing into distinct populations around 135,000 years ago. "Had linguistic capacity developed later, we would expect to find some modern human populations without language, or with some fundamentally different mode of communication," the researchers argue in their paper. "Neither is the case."

A lag between the emergence of human language and its widespread appearance in the archeological records suggests this novel level of communication molded characteristic human behaviors, from the rise of systemic engraving to burials of our dead, the team believes. Such behaviors have only been located sporadically before then. "Somehow it stimulated human thinking and helped create these kinds of behaviors," says Miyagawa. "If we are right, people were learning from each other [due to language] and encouraging innovations of the types we saw 100,000 years ago."

Other archaeologists, however, counter that these behavioral shifts were a more gradual accumulation, aided by – but not necessarily centered around – language as humans experimented with new materials and formed more elaborate social networks over time. What's more, the capacity for language pre-exists our species and is present in other animals. But evidence for consistent use of symbolic thinking has not been so widespread.

While the way we arrange words to create complex meaning has been detected in other animals, how humans use it appears unique, at least so far, as there's a lot we're still learning about how other animals communicate. Using words symbolically, as in figurative speech such as 'to spill the beans', is one example of the unique way

we use language. "This gives us the ability to generate very sophisticated thoughts and to communicate them to others," explains Miyagawa, arguing "language was the trigger for modern human behavior."

This research was published in *Frontiers in Psychology*.

HOMO ERECTUS THRIVED IN A DESERT, STUDY FINDS, SUGGESTING THE EARLY HUMANS COULD ADAPT TO EXTREME ENVIRONMENTS

By Sarah Kuta
January 17, 2025
From Smithsonian at https://www.smithsonianmag.com/smart-news/homo-erectus-thrived-in-a-desert-study-finds-suggesting-the-early-humans-could-adapt-to-extreme-environments-180985864/

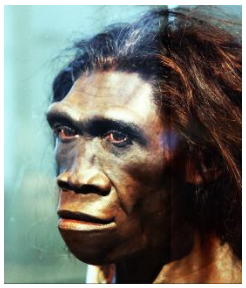

Photo by Tim Evanson via Flickr under CC BY-SA 2.0. See https://www.flickr.com/photos/timevanson/7283200708/in/photostream/

Our early human ancestors might have been more adaptable than previously thought: New research suggests Homo erectus was able to survive—and even thrive—after its home in East Africa shriveled up and became a dry, barren landscape.

H. erectus is a now-extinct species of early human that experts say arose some two million years ago in Africa. Walking upright, they had longer legs and shorter arms than previous hominins, which gave them a distinctly modern human-like appearance. They also had bigger brains than earlier species, though not quite as large as the brains of today's humans, Homo sapiens. H. erectus persisted for more than 1.5 million years before going extinct around 100,000 years ago. It was one of the first early human species to migrate out of Africa, traveling to distant locales like China and Indonesia. In all, the species existed on Earth for far longer than today's humans have so far, with H. sapiens appearing a mere 300,000 years ago.

But how was this species able to survive for so long and inhabit such a wide geographic range? Researchers have long puzzled over these questions. Now, it turns out that "ecological flexibility" may be the answer, according to a new paper published Thursday in the journal *Communications Earth & Environment*. "That success came down to their ability to survive over a long period marked by many changes to the environment and climate," says study lead author Julio Mercader, a paleoecologist at the University of Calgary in Canada, in a statement.

An international team of scientists reached this conclusion after studying a site in northern Tanzania called Engaji Nanyori. The site is rich in H. erectus fossils, as well as stone tools and fossilized grains of pollen. Researchers carefully analyzed these artifacts, as well as rocks, butchered animal bones and other types of archaeological evidence, to reconstruct what the past environment looked like. This type of study is "an immense amount of work," as Elke Zeller, a climate scientist at the University of Arizona who did not participate in the project, tells the *New York Times'* Carl Zimmer.

Through these painstaking efforts, the research painted a picture of Engaji Nanyori as a dry, semi-desert environment, with little water and few plants. But the landscape hadn't always been that way—in fact, it was previously an open woodland for hundreds of thousands of years, the team found. Roughly a million years ago, the climate shifted drastically, and Engaji Nanyori went from a relatively hospitable habitat to a hyper-arid shrubland.

Somehow, H. erectus was able to adjust to this new landscape. The early humans visited water holes that popped up after it rained and hunted the animals that congregated to drink. And across millennia, they repeatedly inhabited the same sites near rivers and streams, strategically taking advantage of the resources they offered. H. erectus also made their stone tools sharper, presumably for butchery, per the paper, and began

bringing tools with them when moving to new locations. These advancements would have helped them hunt prey and scavenge carcasses whenever they were available. “They may have had strategies where they basically say, ‘This is a good tool. I should bring it with me and be ready if we find food,’” says study co-author Paul Durkin, a geologist at the University of Manitoba in Canada, to the *New York Times*. This adaptability could help explain why H. erectus was able to move out of Africa and successfully spread to other parts of the world, the researchers add.

The findings offer new insights into the lifestyle and behaviors of one of our ancient ancestors, building on other recent research that found H. erectus lived at high altitudes in present-day Ethiopia. But, more broadly, they also help refute the long-held belief that only H. sapiens—with its massive, complex brain—was capable of inhabiting extreme environments.

“Homo sapiens is often considered to be a species that could deal with all ecological circumstances thrown at them—and, indeed, it is impressive what our species was, and has been, able to cope with,” study co-author Michael Petraglia, director of the Australian Research Center for Human Evolution at Griffith University, tells Haaretz’s Ruth Schuster. “However, this does not mean that earlier members of our genus were not also capable of occupying difficult habitats. Our article demonstrates this very clearly and at an early age.”

SWFAS OFFICERS AND BOARD OF DIRECTORS FOR 2026

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Find us on Facebook at Southwest Florida Archaeological Society!

Check out our website at http://swflarchaeology.org/

SWFAS AND FAS MEMBERSHIP APPLICATIONS

We encourage those interested in Florida archaeology to become members of The Florida Anthropological Society (FAS) and The Southwest Florida Archaeological Society (SWFAS). Annual dues are due in January and membership applications to both organizations are attached. Membership in the FAS provides you with four annual volumes of *The Florida Anthropologist* and occasional newsletters on anthropological events in Florida in addition to the annual statewide meeting. More information on FAS can be found online at: www.fasweb.org. Membership in SWFAS offers you a local series of talks on archaeological and anthropological subjects that you can attend. The SWFAS monthly newsletter keeps you up to date on local events as well as other important archaeological topics. We urge you to support both with your membership. All of the SWFAS Lecture Series are open to the public at no charge.

JOIN US!

The Southwest Florida Archaeological Society

http://swflarchaeology.org/

The Southwest Florida Archaeological Society (SWFAS) was founded in 1980 as a not-for profit corporation to provide a meeting place for people interested in the area's past.

Our goals are to:

- Learn more of the area's history
- Create a place for sharing of this information
- Advocate for preservation of cultural resources

Its members include professional and amateur archaeologists and interested members of the general public. Members come from all walks of life and age groups. They share a lively curiosity, a respect for the people who preceded them here, and a feeling of responsibility for the conservation of the places and objects they left behind.

The Society holds monthly meetings between October and April, attracting speakers who are in the forefront of archaeological and historical research. Occasionally members join in trips to historical and archaeological sites.

A monthly newsletter, Facebook page, and website keep members abreast of our events and happenings.

The organization is a chapter of the Florida Anthropological Society, a statewide organization that publishes quarterly newsletters and a journal, *The Florida Anthropologist,* and holds an annual conference.

I want to help The Southwest Florida Archaeology Society preserve and interpret Florida's heritage!

Name (please print) _____

Address_____

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Check One:

Individual ($20) _____ Sustaining Individual ($50) _____ Family ($35) _____

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Donation to Support SWFAS Speakers and Programs _____

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I hereby agree to abide by the rules and bylaws of the Southwest Archaeological Society. I further release from any and all liability due to accident and injury to myself, dependents and any property owners cooperating with the society.

Signature: _____Date _____

Please make your check out to SWFAS and mail to:

Charlie Strader
SWFAS Treasurer
27655 Kent Road
Bonita Springs, FL 34135

REV. 12052017

FAS Membership Categories

Membership in the Society is open to all interested individuals who are willing to abide by the Florida Anthropological Society Statement of Ethical Responsibilities, which can be found on our website **fasweb.org.** *Membership is for one year.* SELECT LEVEL BELOW.

___Student*	$20	___Institutional	$50
___Regular	$40	___Sustaining	$100
___Family	$45		

*Student membership is open to graduate, undergraduate and high school students. A photocopy of your student ID must accompany payment. ****Add $25 for foreign addresses.**

Member Name:_____

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Please choose how you wish to receive the quarterly journal, *The Florida Anthropologist*.

___Digital Only (via a password protected web link) Note: Student members only receive digital access.

___Both Digital and Printed

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In addition to this Membership, I also wish to make a donation to:

$_____ Dot Moore/FAS Student Grant Fund $_____ Florida Archaeology Month Account

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Total Enclosed: $_____

_____ I agree to abide by the Code of Ethics of the Florida Anthropological Society.

_____

Signature Date

Send Membership Form and Dues Payment to:

Florida Anthropological Society, P O Box 1561 Boynton Beach, FL 33425

You can join online or pay Membership dues renewals via PayPal on our website fasweb.org.

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