Southwest Florida Archaeological Society (SWFAS)
OUR 43rd YEAR
March 2023 Newsletter

https://swflarchaeology.org/

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

MARCH IS ARCHAEOLOGY MONTH

Our Presentation this month at the IMAG comes at a very timely moment. The presentation is by a member of the Seminole Tribe and two staff archaeologists at the Big Cypress Reservation discuss the repatriation of Native American burials, sacred regalia, and other cultural Native American artifacts. Repatriation is something that all Native American tribes, Alaskan Natives, and Native Hawaiian Groups have pursued with the Federal Government for many years. On November 16, 1990, the US Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA) that protected Native American cultural items found on federal lands that have been transferred to a state by the federal government. On tribal land, however, it applies only to institutions receiving federal funds.

The intent of this legislation was to address long-standing claims to return human remains and cultural items. This statute was designed to provide for the return and respectful treatment of Native American deceased ancestors, and affects us as archaeologists. While the Act imposes hefty fines it, unfortunately does not address private land and state land not transferred by the federal government. It does, however, prohibit all trafficking in Native American human remains.

Congress passed, and on December 21, 2022, President Biden signed into law, the Safeguard Tribal Objects of Patrimony Act (STOP Act) making it illegal to export objects obtained in violation of the NAGPRA Act. This provides another legal tool to utilize other countries law enforcement agencies to regain stolen indigenous property from foreign nations and repatriate them to their tribe. It increases the penalties for violations of the NAGPRA Act and it creates an export system to support the legitimate trade in tribal art. This Act also ties in with the Native American Graves Protection and Repatriation Act requiring museums and universities to disclose the items in their inventory and to notify and transfer them to the affiliated tribe.

Additional federal legislation passed on December 23, 2022 appropriated a record $204 million in funding to support the Historic Preservation Fund (HPF). The HPF is the main funding for both State and Tribal Historic Preservation Officers who represent the "front line" in cultural heritage preservation throughout the USA. Remember, Native American history is an integral part of our past and history as well, and that historical preservation is important to all of us.

CALUSA COAST 2023

The month of March again features Calusa Coast 2023 events that are scheduled throughout the month and celebrate archaeology and the early inhabitants of southwest Florida, the Calusa. Celebrate with us and learn more about the Calusa at one of the upcoming events. We'll see you there! See the schedule of events below.

ANCIENT DNA (aDNA) PART 1

"Every person alive today is descended from people who lived as hunter-gatherers in Africa". DNA from modern populations can, however, only tell a small story of the populations that lived and moved about in Africa. Sequencing and analyzing ancient DNA (aDNA) gives us new insights into demographic changes in the Late Stone Age 50,000 years ago. The use of archaeology, linguistics, and oral and written history only allows us to reconstruct the past to about the last 5,000 years and the use of aDNA works for much earlier populations. See below.

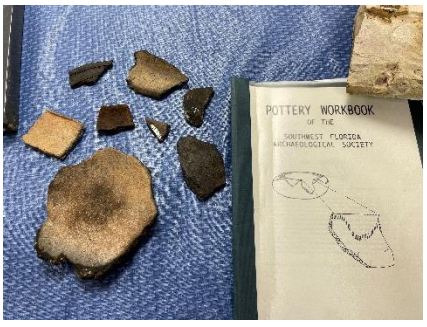
ANCIENT DNA (aDNA) PART 2
The use of DNA and now especially, aDNA, has uncovered a number of new avenues of discovery that were never foreseen. Many were shocked in 2010 when the sequenced genome of Neanderthals indicated that Neanderthals and homo sapiens mated and had children. The latest discovery from aDNA is that there were genetic reasons that people died while others survived the Black Plague in Europe in the 1300's. See below.

THE PALEO DIET, WHAT WAS IT REALLY?
We tend to think of Neanderthals mainly cooking meat over an open fire, the original cook-out, with meat as their sole dietary item; but was it really that way? Apparently not. Recent findings at Shanidar Cave in northern Iraq by Dr. Ceren Kabukcu of the University of Liverpool, has documented in the Journal of Antiquity the use of pulses along with the use of wild roots, tubers, and nuts. Pulses are the dried seeds of legumes such as beans, lentils, and peas. Wild mustard was also identified as being used to flavor food. Similar findings at the Franchthi Cave in Greece were also noted. See below.

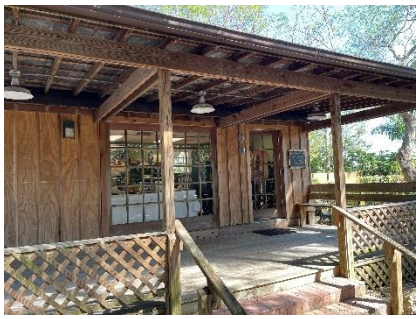
HADRIAN'S WALL – VALLUM HADRIANI
The construction of Hadrian's Wall began in A.D. 122 by the Roman legions that were stationed there to defend Roman Britannia from the Scottish tribes in Caledonia to the north. Much has been written about the 73-mile (117 km) long wall that spans the country from the Irish Sea to the North Sea but today a new study using lidar is examining the area north of the wall. Funded by the UK's Leverhulme Trust, it is already finding many new sites. Additionally, a 2019 report by Matthew Symonds in the Journal of Antiquity (94 (373): 92-109) recognized that the location of the gates and towers on Hadrian's Wall were established to control the river fords and the existing road system for a greater level of military control of the local population. See below.

HADRIAN'S WALL – COMPLETE HISTORY
As a supplement to the above article on Hadrian's Wall, we have included the Wikipedia listing on Hadrian's Wall for a complete historical background on the wall to remind us of the many facets that the construction of the wall impacted. See below.

SWFAS 2023 DUES: Oops, did you Forget?
Another reminder to kindly remit your 2023 SWFAS dues to support archaeology, history and preservation as well as our lecture series by noted professionals. See our website at https://swflarchaeology.org/ to remit on line with a credit card or use the form at the end of this newsletter to pay with a check. Our sole source of income is from your dues and gifts, and SWFAS is a registered Florida non-profit 501(c)(3) entity. Join with us in supporting archaeology, history, and preservation in Southwest Florida. Thank you in advance.

SWFAS CRAIGHEAD ARCHAEOLOGICAL LABORATORY NEWS


In February, the Collier Museum at Government Center had two family fun days, For the Love of Plants and a Florida Pottery workshop. The For the Love of Plants included demonstrations of basketmaking and how plants have many purposes including food and medicines. Crafts and activities included planting seeds to take home. The Florida Pottery workshop included the pottery styles of ancient Florida and the ways that archeologists use and identify ceramics. Participants had the opportunity to construct their own piece. SWFAS supported the Collier Museum's Plants and Pottery events in February by providing demos of artifacts found in southwest Florida and how they were used by the ancient Native Americans. They also gave away posters and bookmarks to young and mature archaeology enthusiasts.



COLLIER COUNTY MUSEUM AT GOVERNMENT CENTER ARCHAEOLOGY DAY

Celebrate Archaeology Day at the Collier County Museum with us on Saturday March 11, 2023 10am-1pm. The SWFAS Craighead Archaeological Laboratory will be open to the public as a part of the museum's celebration of archaeology in SW Florida.

FEBRUARY SWFAS PRESENTATION

Our February SWFAS Presentation at the IMAG featured Dr. Maranda Kles, Vice President of a Cultural Resource Management Company (CRM) in Sarasota, Florida. Dr. Kles shared with us three areas of her research: cranial measurements that delineated the differences and distributions of extinct populations through time, the history of the Cuban fishing Rancheros on the southeast Florida coast, and the location and distribution of cemeteries in Ft. Myers through time. These topics constituted her "Foreheads, Fishing, and Forts" title of her presentation. It was a highly interesting travel through time in southwest Florida and was enjoyed by all.

MARCH PRESENTATION: MARCH 15, 2023, 7:00 PM
FORT MYERS, IMAG HISTORY & SCIENCE CENTER
NO MORE STOLEN ANCESTORS: THE SEMINOLE TRIBE OF FLORIDA'S REPATRIATION EFFORTS

Tina Osceola, Director of the Tribal Historic Preservation Office (THPO) at the Big Cypress Seminole Reservation in Clewiston, Florida, will speak to us and explain to us what repatriation is and its meaning to the Seminoles. This explains why the efforts of the Seminole tribe's repatriation committee carries the motto "No More Stolen Ancestors". She will be joined in her presentation by two archaeologists that work with her at the Big Cypress Reservation. The Seminole Repatriation Committee has been making strategic moves to keep pressure on institutions like the Smithsonian National Museum of Natural History (NMNH), which has a collection of about 1,500 Seminole ancestor burials and tens of thousands of archaeological objects, some are of a religious and ceremonial nature. Much of the new federal legislation applies only to institutions and entities that accept federal funding, however, smaller institutions will also need to comply with this new legislation eventually.

The committee has appealed to the National Congress of American Indians (NCAI) for support and has engaged with national media that are interested in telling the tribe's story. It was successful in getting the NMNH to revise its policy to include provisions to repatriate human remains and other items that were previously identified as "culturally unidentifiable." The tribe has also joined with seven other Native American groups – called the Star Alliance – to get the University of Alabama's Moundville collection of almost 5,900 remains and objects repatriated. Remember: most of this material is in storage at these museums and are not and will never be on display. Unfortunately, Native Americans have had their ancestors disturbed, archaeological collections were split up and divided through many institutions. Today the search for missing ancestors remains, religious, and funerary objects continues. It's not an easy process and it becomes daunting, especially with institutions with older collections that are not sure of the provenience or tribe of many of the artifacts on display and in storage.

Tina Osceola became director of the Tribal Historic Preservation Office (THPO) of the Seminole Tribe in August 2021. She is known for her passion on issues that are important to the Seminole Tribe – her work to have the remains and funerary objects of tribal ancestors returned – and the years she spent as one of Tribal Court's original judges. In this new position Tina is responsible for all of the archaeological work done on all of the Seminole reservations. That includes excavations by the tribe and by Cultural Resource Management (CRM) organizations, and all reservation permitting. She has worked for many years with Paul Backhouse, a Registered Professional Archaeologist and Senior Director of the tribal Heritage and Environmental Resource Office (HERO). Osceola is a lifelong resident of the Naples community.

TO GO TO THE IMAG:

FROM THE SOUTH: Take the 75 fwy North toward Ft. Myers, then take the FL-82 exit, EXIT 138, toward ML King Jr Blvd/Ft Myers/Immokalee. Turn left onto FL-82/State Road 82. Continue to follow FL-82. Go 3.60 miles, then turn left onto Cranford Ave. Go 0.09 miles, and the IMAG is on the right.

FROM THE NORTH: Take I-75 South toward Fort Myers. Take the FL-82 exit, EXIT 138, toward Ft Myers/ML King Jr Blvd/Immokalee. Merge onto Dr Martin Luther King Blvd/FL-82 toward Ft Myers/Edison/Ford Estates/Imaginarium. Go 3.46 miles, then turn left onto Cranford Ave. Go 0.09 miles, and the IMAG is on the right.

THE FAS 75TH ANNUAL MEETING

The FAS 75th Annual meeting will be held in St. Augustine, FL May 12-14, 2023. Reserve the dates and please plan to attend. Flagler College will be the host this year with the Saturday banquet in the historic Ponce de Leon Hotel. Archaeological and historic field trips are available along with the ambiance of Old St. Augustine. Go to the FAS website at https://fasweb.org/annual-meeting/ to register. See you there! While you are on the website, consider joining the FAS to further support Florida archaeology and receive The Florida Anthropologist.

APRIL PRESENTATION IN NAPLES

APRIL 19, 2023, NAPLES, COLLIER COUNTY MUSEUM AT GOVERNMENT CENTER

Steve Bertone, Research Biologist with the Rookery Bay National Estuarine Research Reserve (NERR) in Naples, FL. Steve has conducted biological research and worked on several archaeological projects in the Reserve and the 10,000 Islands. He will be speaking about the early settlers in the NERR.

CALUSA COAST EVENTS

The annual Calusa Coast Event, held this March in celebration of Florida Archaeology Month, is a collaborative effort to educate people about the archaeology and ethnography of the Indigenous peoples of southwest Florida. Events scheduled are:

- **March 4, 10am - Marco Island Historical Museum - Family Fun Day**

Marco Island Historical Museum is sharing the story of the Calusa people and their indigenous relatives. Children will learn about the Calusa peoples' creativity using shell tools with hands-on examples and opportunities to build their own. Activities will guide children through the history of the Calusa people and their connection to other

indigenous peoples in this area. Take home activities will also be provided. For information go to https://colliermuseums.com/event/calusa-coast-family-fun-day

- **March 11, 10am – 1pm, Collier County Museum - Southwest Florida Archaeology Day**

Guests of all ages can get hands-on with archaeology at this free outdoor event. Meet archaeologists and learn how they study the ancient and historic people of Southwest Florida. Practice using the tools and techniques used to uncover the past with hands-on activities. Try to hunt using ancient tools and pick up some new skills with traditional and historic crafts. For information go to https://colliermuseums.com/event/southwest-florida-archaeology-day

- **March 16, 10am, Koreshan State Park - Tales of Southwest Florida: Archaeology of the Calusa**

Join Natalie De La Torre Salas of the Florida Public Archaeology Network and Florida Atlantic University for an in depth look at the Calusa. The Calusa were called "the fierce people" in part because they held off Spanish domination for almost 200 years, but is the nickname really warranted? Learn about the engineering, trade, and power that made the Calusa a dominating force in Southwest Florida long before the Spanish arrived. This program is free with park entry fee. Reservations are required and can be made by going to https://www.eventbrite.com/e/tales-of-southwest-florida-archaeology-of-the-calusa-tickets-495182212327

- **March 17, 9am, Koreshan State Park – The Art of the Calusa**

Join Robert Hughes, Museum Curator at Koreshan State Park, an interesting and informative talk about the history, culture and art of the Calusa. This presentation will highlight the art recovered from excavations across Southwest Florida. The program will be held in the Art Hall. Program is free with park entry fee. Reservations are required and can be made by going to https://www.eventbrite.com/e/art-of-the-calusa-tickets-403645553717

- **March 18, 10am, Bonita Springs Historical Walk**

Learn about the archaeology of the first peoples to live in Bonita Springs beginning over 8,0000 years ago. Hear the stories of the mighty Calusa Chiefdom, which controlled all of Southwest Florida and whose capital was Mound Key in Estero Bay, including their contact with the Spanish starting in 1513. See demonstrations of the tools the Calusa used to prosper: the atlatl (an ancient device to throw a spear for fishing) shell tool making, weaving, and more. Walk to Depot and Island Parks and learn about our native plants used by Native Americans. Start/End at Liles Hotel History Center in Riverside Park. Total walk distance is about 1 mile and tour duration of 1.5 to 2 hours. Meet at 10am at the Liles Hotel in Riverside Park, 27300 Old 41 Road, Bonita Springs, FL 34135. Cost $25 in advance, $35 the day of. For more information go to http://www.bonitaspringshistoricalsociety.org/Happenings/tours/index.html .

- **March 23, 11am – 1pm, Koreshan State Park Junior Archaeologist Program**

Join Florida State Park rangers for a fun kid's program on archaeology in the picnic area at Koreshan State Park. Find out what an archaeologist does to locate historic and prehistoric sites, find and identify artifacts, and help us all learn more about our past. This program is free with park entry fee.

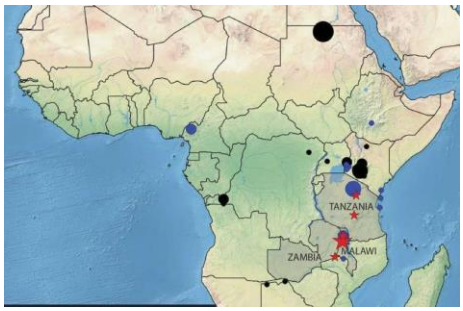
- **March 25, 10am, Calusa Nature Center**

Join Austin J. Bell at the Calusa Nature Center and Planetarium for the final event of the annual Calusa Coast 2023 series of events! Austin Bell is curator of collections for the Marco Island Historical Society and a consulting scholar at the Penn Museum. Bell shares an in-depth look at the Key Marco Cat. Bell explores nine periods in the life of the six-inch-high wooden carving, beginning with how it was sculpted with shell and shark-tooth tools and what it may have represented to the ancient Calusa—perhaps a human-panther god. Preserved in the muck for centuries on Marco Island and discovered in pristine condition due to its oxygen-free environment, the Cat has since traveled more than 12,000 miles and has been viewed by millions of people. It is one of the Smithsonian Institution's most irreplaceable items. In this fascinating account, Bell traces the clues to the Cat's mysterious origins that have emerged in its later lives. Captivating readers with the miracle and beauty of this rare example of pre-Columbian art, Bell marvels at how an object originally understood to hold cosmological power has indeed transformed the people and places around it. The Nine Lives of Florida's Famous Key Marco Cat is the story of a timeless masterpiece of staggering simplicity that has prevailed over impossibly long odds. Register at https://fareharbor.com/embeds/book/calusanature/items/365387/calendar/2023/03/?flow=244411&full-items=yes .

ARTICLES

ANCIENT DNA HELPS REVEAL THE SOCIAL CHANGES IN AFRICA 50,000 YEARS AGO THAT SHAPED THE HUMAN STORY

By Elizabeth Sawchuck , Jessica Thompson, Mary Prendergast
February 24, 2022
From Phys.Org at https://phys.org/news/2022-02-ancient-dna-reveal-social-africa.html#:~:text=Ancient%20DNA%20helps%20reveal%20the%20social%20changes%20in,ancient%20ancestors.%20Credit%3A%20Nina%20R%2FWikimedia%20Commons%2C%20CC%20BY



Every person alive on the planet today is descended from people who lived as hunter-gatherers in Africa. The continent is the cradle of human origins and ingenuity, and with each new fossil and archaeological discovery, we learn more about our shared African past. Such research tends to focus on when our species, Homo sapiens, spread out to other landmasses 80,000–60,000 years ago. But what happened in Africa after that, and why don't we know more about the people who remained? Our new study, conducted by an interdisciplinary team of 44 researchers based in 12 countries, helps answer these questions. By sequencing and analyzing ancient DNA (aDNA) from people who lived as long ago as 18,000 years, we roughly doubled the age of sequenced aDNA from sub-Saharan Africa. And this genetic information helps anthropologists like us understand more about how modern humans were moving and mingling in Africa long ago.

Tracing our human past in Africa

Beginning about 300,000 years ago, people in Africa who looked like us—the earliest anatomically modern humans—also started behaving in ways that seem very human. They made new kinds of stone tools and began transporting raw materials up to 250 miles (400 kilometers), likely through trade networks. By 140,000–120,000 years ago, people made clothing from animal skins and began to decorate themselves with pierced marine shell beads.

While early innovations appeared in a patchwork fashion, a more widespread shift happened around 50,000 years ago—around the same time that people started moving into places as distant as Australia. New types of stone and bone tools became common, and people began fashioning and exchanging ostrich eggshell beads. And while most rock art in Africa is undated and badly weathered, an increase in ochre pigment at archaeological sites hints at an explosion of art. What caused this shift, known as the Later Stone Age transition, has been a longstanding archaeological mystery. Why would certain tools and behaviors, which up until that point had appeared in a piecemeal way across Africa, suddenly become widespread? Did it have something to do with changes in the number of people, or how they interacted?

The challenge of accessing the deep past

Archaeologists reconstruct human behavior in the past mainly through things people left behind—remains of their meals, tools, ornaments and sometimes even their bodies. These records may accumulate over thousands of years, creating views of daily livelihoods that are really averages over long periods of time. However, it's hard to study ancient demography, or how populations changed, from the archaeological record alone. This is where DNA can help. When combined with evidence from archaeology, linguistics and oral and written history, scientists can piece together how people moved and interacted based on which groups share genetic similarities.

But DNA from living people can't tell the whole story. African populations have been transformed over the past 5,000 years by the spread of herding and farming, the development of cities, ancient pandemics and the ravages of colonialism and slavery. These processes caused some lineages to vanish and brought others together, forming new populations. Using present-day DNA to reconstruct ancient genetic landscapes is like reading a letter that was left out in the rain: some words are there but blurred, and some are gone completely. Researchers need ancient DNA from archaeological human remains to explore human diversity in different places and times and to understand what factors shaped it. Unfortunately, aDNA from Africa is particularly hard to recover

because the continent straddles the equator and heat and humidity degrade DNA. While the oldest aDNA from Eurasia is roughly 400,000 years old, all sequences from sub-Saharan Africa to date have been younger than around 9,000 years.

Breaking the 'tropical ceiling'

Because each person carries genetic legacies inherited from generations of their ancestors, our team was able to use DNA from individuals who lived between 18,000–400 years ago to explore how people interacted as far back as the last 80,000–50,000 years. This allowed us, for the first time, to test whether demographic change played a role in the Later Stone Age transition.

Our team sequenced aDNA from six individuals buried in what are now Tanzania, Malawi and Zambia. We compared these sequences to previously studied aDNA from 28 individuals buried at sites stretching from Cameroon to Ethiopia and down to South Africa. We also generated new and improved DNA data for 15 of these people, trying to extract as much information as possible from the small handful of ancient African individuals whose DNA is preserved well enough to study. This created the largest genetic dataset so far for studying the population history of ancient African foragers—people who hunted, gathered or fished. We used it to explore population structures that existed prior to the sweeping changes of the past few thousand years.

DNA weighs in on a longstanding debate

We found that people did in fact change how they moved and interacted around the Later Stone Age transition. Despite being separated by thousands of miles and years, all the ancient individuals in this study were descended from the same three populations related to ancient and present-day eastern, southern and central Africans. The presence of eastern African ancestry as far south as Zambia, and southern African ancestry as far north as Kenya, indicates that people were moving long distances and having children with people located far away from where they were born. The only way this population structure could have emerged is if people were moving long distances over many millennia.

Additionally, our research showed that almost all ancient eastern Africans shared an unexpectedly high number of genetic variations with hunter-gatherers who today live in central African rainforests, making ancient eastern Africa truly a genetic melting pot. We could tell that this mixing and moving happened after about 50,000 years ago, when there was a major split in central African forager populations. We also noted that the individuals in our study were genetically most like only their closest geographic neighbors. This tells us that after around 20,000 years ago, the foragers in some African regions were almost exclusively finding their partners locally. This practice must have been extremely strong and persisted for a very long time, as our results show that some groups remained genetically independent of their neighbors over several thousand years. It was especially clear in Malawi and Zambia, where the only close relationships we detected were between people buried around the same time at the same sites.

We don't know why people began "living locally" again. Changing environments as the last Ice Age peaked and waned between about 26,000–11,500 years ago may have made it more economical to forage closer to home, or perhaps elaborate exchange networks reduced the need for people to travel with objects. Alternatively, new group identities may have emerged, restructuring marriage rules. If so, we would expect to see artifacts and other traditions like rock art diversify, with specific types clumped into different regions. Indeed, this is exactly what archaeologists find—a trend known as regionalization. Now we know that this phenomenon not only affected cultural traditions, but also the flow of genes.

New data, new questions

As always, aDNA research raises as many questions as answers. Finding central African ancestry throughout eastern and southern Africa prompts anthropologists to reconsider how interconnected these regions were in the distant past. This is important because central Africa has remained archaeologically understudied, in part because of political, economic and logistical challenges that make research there difficult. Additionally, while genetic evidence supports a major demographic transition in Africa after 50,000 years ago, we still don't know the key drivers. Determining what triggered the Later Stone Age transition will require closer examination of

regional environmental, archaeological and genetic records to understand how this process unfolded across sub-Saharan Africa.

Finally, this study is a stark reminder that researchers still have much to learn from ancient individuals and artifacts held in African museums, and highlights the critical role of the curators who steward these collections. While some human remains in this study were recovered within the past decade, others have been in museums for a half-century. Even though technological advances are pushing back the time limits for aDNA, it is important to remember that scientists have only just begun to understand human diversity in Africa, past and present.

THE BLACK DEATH LEGACY, NEANDERTHAL FAMILY TIES, AND OTHER SECRETS REVEALED BY DNA IN 2022

By Katie Hunt
December 20, 2022
From CNN at https://www.cnn.com/2022/12/20/world/year-in-ancient-dna-discoveries-2022-scn/index.html

A.S. Leybin

The Black Death, the world's most devastating plague outbreak, killed half of medieval Europe's population in the space of seven years in the 14th century, shifting the course of human history. But research published in October suggested it was more than luck that determined who lived and who died. Analysis of centuries-old DNA from both victims and survivors of the Black Death identified key genetic differences that helped people survive the plague, according to a study published in the journal Nature.

That genetic legacy continues to shape the human immune system today, with genes that once conferred protection against the plague now linked to a greater vulnerability to autoimmune diseases such as Crohn's and rheumatoid arthritis. Science magazine named the discovery one of its top breakthroughs of 2022. Ancient DNA also shed light on the origins of the plague outbreak that caused the Black Death — work detailed in a study published in June. Genetic material extracted from skeletons buried in a graveyard in Kyrgyzstan, where tombstones referred to a mysterious pestilence, revealed the DNA of the plague bacterium — which scientists call Yersinia pestis — in three people who died in 1338, several years before the disease entered Europe in 1347.

Neanderthal family portrait

Scientists uncovered a genetic snapshot of the oldest known family group, using ancient DNA from Neanderthals who lived in Chagyrskaya Cave in southern Siberia in Russia. The riverside hunting camp about 54,000 years ago was home to a tight community of around 20 Neanderthals, including a father and his teenage daughter, a young male who might have been a nephew or a cousin, and an adult female who was a second-degree relative — perhaps an aunt or a grandmother.

The researchers also detected an unexpected pattern of female migration among the different threads of genetic ancestry. The diversity of the Y chromosome DNA, which is inherited through the male line, was a lot lower than that of the mitochondrial DNA, which is passed from mothers. The study calculated that, in this group, two male individuals could expect to share an ancestor around 450 years before they lived. By contrast, the equivalent estimate for female individuals was around 4,350 years. The researchers said the best explanation for this was that more than 60% of the female Neanderthals in the small Chagyrskaya group had migrated from another community. This social structure is common among present-day hunter-gatherer societies and is known as patrilocality.

Lush Arctic

Scientists in Denmark detected the world's oldest known DNA sequences in sediment from the ice age. The core of earth, taken from northern Greenland, revealed the polar region was once abundant with plant and animal life 2 million years ago. Mastodons, reindeer, geese, lemmings and hares lived in an ecosystem that was a mix of temperate and Arctic flora and fauna. The genetic material in the dirt, shed by all of the living

organisms in the environment so long ago, tells a more complete story of prehistoric life than the fossil record. This unparalleled ancient ecosystem has no modern equivalent, but it could provide a genetic road map for how some species might adapt to the climate crisis.

Medieval well mystery

Construction workers breaking ground in 2004 on a shopping mall in Norwich, England, discovered 17 bodies at the bottom of an 800-year-old well. To understand more about how the six adults and 11 children whose remains were found there died, scientists were recently able to extract detailed genetic material preserved in the bones thanks to advances in ancient DNA sequencing. The genomes of six of the individuals showed that four of them were related — including three sisters, the youngest of whom was 5 to 10 years old. Further analysis of the genetic material suggested that all six were "almost certainly" Ashkenazi Jews.

Judaism is primarily a shared religious and cultural identity, but as a result of a long-standing practice of marrying within the community, Ashkenazi Jewish groups often carry a distinctive genetic ancestry that includes markers for some rare genetic disorders. The researchers believe they all died during antisemitic violence that wracked the city — most likely a February 1190 riot related to the Third Crusade, one of a series of religious wars supported by the Catholic church.

Pompeii victim

Pompeii, preserved in volcanic ash after the eruption of Mount Vesuvius in 79 AD, is one of the world's most intensively studied archaeological sites, but getting detailed genetic information from the skeletal remains preserved in the city had long eluded scientists.

Earlier this year, scientists said they had for the first time successfully sequenced the genome of a man who died after the eruption. Before this latest study, only short stretches of mitochondrial DNA from human and animal remains in Pompeii had been sequenced. It may have been possible to successfully extract ancient DNA from their samples because pyroclastic materials — a burning hot mix of gas, lava and debris — discharged during the eruption might have protected the DNA from environmental factors, such as oxygen in the atmosphere that led to decomposing. The information shed light on the man's ancestry and health.

Hybrid animal

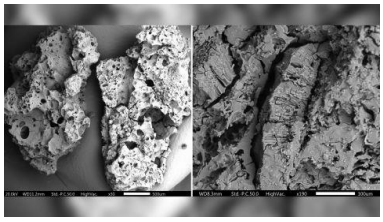
A majestic horselike creature known as a kunga that lived 4,500 years ago was the earliest known hybrid animal — with parents from two different species, according to research published in January. Descriptions and imagery in Mesopotamian art and texts portrayed a powerful animal that pulled war wagons into battle and royal vehicles in parades. Intact skeletons of the creatures were buried alongside high status people from the era. Its true identity, however, had long puzzled archaeologists. Domesticated horses didn't arrive in the region, sometimes referred to as the Fertile Crescent, until 4,000 years ago. Sequencing of DNA from the animal's skeleton revealed it had a Syrian wild ass for a father and a donkey mom, and was likely deliberately bred by humans.

First Americans?

DNA sequencing revealed the origin of some odd-looking human fossils — a thigh bone and part of a skull — found in a cave in southwest China in 1989. Primitive features of the bones had vexed scientists, who questioned what species of human the fossils belonged to. Perhaps, they thought, they belonged to a hybrid population of extinct and modern humans or maybe a previously unknown human species that existed alongside our own. Chinese scientists recently extracted genetic material from the skull cap and found that the skull belonged to a female individual, who was most likely a direct modern human ancestor — a member of Homo sapiens.

The researchers then compared the genome extracted from the ancient DNA to the genomes of other people from around the world — both modern and ancient. They found that the bones belonged to an individual who was linked deeply to the East Asian ancestry of Native Americans. The researchers believe that this group of people traveled north to Siberia and then crossed the Bering Strait to become some of the first Americans.

NEANDERTHALS COOKED MEALS WITH PULSES 70,000 YEARS AGO
By Katie Hunt
November 22, 2022
From CNN at https://www.cnn.com/2022/11/22/world/prehistoric-diets-plants-neanderthals-scn/index.html


Ceren Kabukcu

Stone Age cooks were surprisingly sophisticated, combining an array of ingredients and using different techniques to prepare and flavor their meals, analysis of some the earliest charred food remains has suggested. Plant material found at the Shanidar Cave in northern Iraq — which is famous for its burial of a Neanderthal surrounded by flowers — and Franchthi Cave in Greece revealed prehistoric cooking by Neanderthals and early modern humans was complex, involving several steps, and that the foods used were diverse, according to a new study published in the journal Antiquity.

Wild nuts, peas, vetch, a legume which had edible seed pods, and grasses were often combined with pulses like beans or lentils, the most commonly identified ingredient, and at times, wild mustard. To make the plants more palatable, pulses, which have a naturally bitter taste, were soaked, coarsely ground or pounded with stones to remove their husk. At Shanidar Cave, the researchers studied plant remains from 70,000 years ago, when the space was inhabited by Neanderthals, an extinct species of human, and 40,000 years ago, when it was home to early modern humans (Homo sapiens). The charred food remains from Franchthi Cave dated from 12,000 years ago, when it was also occupied by hunter-gatherer Homo sapiens.

Despite the distance in time and space, similar plants and cooking techniques were identified at both sites — possibly suggesting a shared culinary tradition, said the study's lead author Dr. Ceren Kabukcu, an archaeobotanical scientist at the University of Liverpool in the United Kingdom. Based on the food remains researchers analyzed, Neanderthals, the heavy-browed hominins who disappeared about 40,000 years ago, and Homo sapiens appeared to use similar ingredients and techniques, she added, although wild mustard was only found at Shanidar Cave dating back to when it was occupied by Homo sapiens.

Early processed food
A breadlike substance was found at the Greek cave, although it wasn't clear what it was made from. The evidence that ancient humans pounded and soaked pulses at Shanidar Cave 70,000 years ago is the earliest direct evidence outside Africa of the processing of plants for food, according to Kabukcu. Kabukcu said she was surprised to find that prehistoric people were combining plant ingredients in this way, an indication that flavor was clearly important. She had expected to find only starchy plants like roots and tubers, which on face value appear to be more nutritious and are easier to prepare.

Much research on prehistoric diets has focused on whether early humans were predominantly meat eaters, but Kabukcu said it was clear they weren't just chomping on woolly mammoth steaks. Our ancient ancestors ate a varied diet depending on where they lived, and this likely included a wide range of plants. Such creative cooking techniques were once thought to have emerged only with the shift from the hunter-gatherer lifestyle to humans' focus on agriculture — known as the Neolithic transition — that took place between 6,000 to 10,000 years ago. What's more, she said, the research suggested life in the Stone Age was not just a brutal fight to survive, at least at these two sites, and that prehistoric humans selectively foraged a variety of different plants and understood their different flavor profiles.

John McNabb, a professor at the Centre for the Archaeology of Human Origins at the University of Southampton in the UK said that scientific understanding of the Neanderthal diet has changed significantly "as we move away from the idea of them just consuming huge quantities of hunted game meat." "More data is needed from Shanidar, but if these results are supported then Neanderthals were eating pulses and some species from the grass family that required careful preparation before consumption. Sophisticated techniques of food preparation had a much deeper history than previously thought," McNabb, who wasn't involved in the research, said via email. "Even more intriguing is the possibility that they did not deliberately extract all the unpalatable

toxins. Some were left in the food, as the presence of seed coatings suggests — that part of the seed where the bitterness is especially located. A Neanderthal flavor of choice."

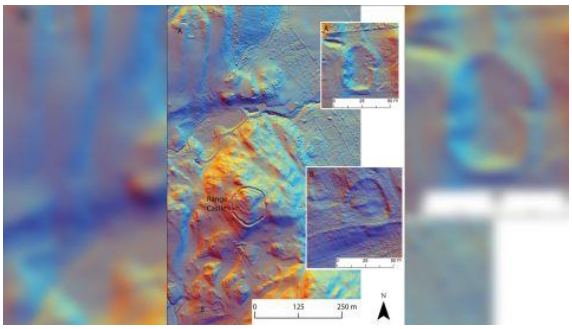
Prehistoric microbiomes tracked

A separate study into prehistoric diets that also published Tuesday analyzed ancient humans' oral microbiome — fungi, bacteria and viruses that reside in the mouth — by using ancient DNA from dental plaque. Researchers led by Andrea Quagliariello, a postdoctoral research fellow in comparative biomedicine and food at the University of Padua in Italy, examined the oral microbiomes of 76 individuals who lived in prehistoric Italy over a period of 30,000 years, as well as microscopic food remains found in calcified plaque.

Quagliariello and his team were able to identify trends in diet and cooking techniques, such as the introduction of fermentation and milk, and a shift to a greater reliance on carbohydrates associated with an agriculture-based diet. McNabb said it was impressive that researchers had been able chart changes over such a long period of time. "What the study also does is support the growing idea that the Neolithic was not the sudden arrival of new subsistence practices and new cultures as it was once thought to be. It appears to be a slower transition," McNabb, who wasn't involved in the study, said via email.

OVER 100 PREVIOUSLY UNKNOWN IRON-AGE SETTLEMENTS FOUND NORTH OF HADRIAN'S WALL

By Ashley Strickland
May 26, 2022
From CNN at https://www.cnn.com/2022/05/26/world/hadrians-wall-settlements-scn/index.html



This lidar image reveals two newly identified settlements in the vicinity of the Range Castle fort.
Credit: Manuel Fernández-Götz; Dave Cowley; Derek Hamilton; Ian J. Hardwick

More than 100 previously unknown Iron Age settlements have been found during a survey of the region north of Hadrian's Wall in the United Kingdom. The 134 sites correspond to Indigenous settlements that date to Roman occupation. A study detailing the findings published Tuesday in the journal Antiquity. Construction of Hadrian's Wall began in 122 AD in what is now northern England, and the wall was used to designate the northernmost boundary of the Roman Empire. As the ancient Romans expanded further, they built the Antonine Wall about 20 years later across what is now the center of Scotland. This was a brief expansion, however, and the boundary line ultimately became Hadrian's Wall again.

Most research regarding this region has been focused on the Roman side of the story to learn more about their roads, forts, camps and the iconic walls they used in their quest to control northern Britain. Manuel Fernández-Götz, head of archaeology at The University of Edinburgh's School of History, Classics and Archaeology in Scotland, is interested in uncovering the other side of the story: how Roman rule impacted life for Britain's Indigenous Iron Age communities. "This is one of the most exciting regions of the Empire, as it represented its northernmost frontier, and also because Scotland was one of very few areas in Western Europe over which the Roman army never managed to establish full control," said study author Fernández-Götz via email. "So it's a great case study to analyse the impact of imperial powers on societies at the edges of their political borders – a theme that is also relevant for later periods in history."

He leads a project called "Beyond Walls: Reassessing Iron Age and Roman Encounters in Northern Britain," which will explore an area from Durham stretching to the southern Scottish Highlands through August 2024. The project is funded by the UK's Leverhulme Trust and began in September 2021. The first phase of research has been focused on exploring 579 square miles (1,500 square kilometers) around the Burnswark Hill fort in southwest Scotland, which is where Roman legions focused their efforts as the Roman Empire pushed to expand northward. This site is home to the greatest concentration of Roman projectiles found in Britain, a testament to the firepower that these legions carried with them. For centuries, northern Britain was a

“fluctuating frontier area characterised by dynamic patterns of confrontation and exchange between Iron Age communities and the Roman state,” the authors wrote in the study. While written sources from this time period are scarce, the landscape maintains human imprints that can provide more detail.

Fernández-Götz and a team of archaeologists studied lidar data of the area. Lidar, or light and detection ranging, uses lasers to capture an area in 3D. The lidar data revealed 134 previously unrecorded settlements, despite the fact that this area has been well studied in the past. Lidar essentially reveals sites within a landscape that could be easily overlooked if you were to study it from the ground or the air, Fernández-Götz said. “This is an area where new technology and new ways of looking are really making a difference, revealing a large amount of previously unknown information,” he said. It brings the total of Iron Age settlements in the region to 704. Many of these newly found sites are small farmsteads. The structures – not just the fortifications of the wealthy and the powerful – were key to how these Iron Age people lived. “In this way they help us to build a picture of how the mass of the population lived out their lives – how close their nearest neighbours were and how they may have used the landscape for farming and grazing animals,” Fernández-Götz said.

While it’s clear that there was considerable conflict between the local people and the Roman army, it’s possible that they also experienced times of exchange and collaboration “as local farmers connected to the large logistical supply lines that fed the Roman army, for example,” he said. The placement of the sites indicates that there was a pattern of organization behind when and where these Indigenous communities settled, the researchers said. “The important thing about the discovery of many previously unknown sites is that they help us to reconstruct settlement patterns,” said study coauthor Dave Cowley, manager of the aerial survey program at Historic Environment Scotland, in a statement. “Individually they are very much routine, but cumulatively they help us understand the landscape within which the indigenous population lived.”

As the archaeologists continue with their research, they will comb back over some of the notable discoveries made so far using geophysical tools and radiocarbon dating to better understand these settlements and the people who built them. Their findings could paint a portrait of what life was like before, during and after the Roman occupation – and just how much the imperialists disrupted life for local communities.

HADRIAN’S WALL
From Wikipedia
At https://en.wikipedia.org/wiki/Hadrian%27s_Wall

Hadrian's Wall (Latin: Vallum Aelium), also known as the Roman Wall, Picts' Wall, or Vallum Hadriani in Latin, is a former defensive fortification of the Roman province of Britannia, begun in AD 122 in the reign of the Emperor Hadrian.[1] Running from Wallsend on the River Tyne in the east to Bowness-on-Solway in the west of what is now northern England, it was a stone wall with large ditches in front of it and behind it that crossed the whole width of the island. Soldiers were garrisoned along the line of the wall in large forts, smaller milecastles and intervening turrets.[2] In addition to the wall's defensive military role, its gates may have been customs posts.[3]

A significant portion of the wall still stands and can be followed on foot along the adjoining Hadrian's Wall Path. The largest Roman archaeological feature in Britain, it runs a total of 73 miles (117.5 kilometres) in northern England.[4] Regarded as a British cultural icon, Hadrian's Wall is one of Britain's major ancient tourist attractions.[5] It was designated as a UNESCO World Heritage Site in 1987.[6] The turf-built Antonine Wall in what is now central Scotland, which briefly superseded Hadrian's Wall before being abandoned,[7] was declared a World Heritage Site in 2008.[8][9]

Hadrian's Wall marked the boundary between Roman Britannia and unconquered Caledonia to the north.[a] The wall lies entirely within England and has never formed the Anglo-Scottish border, though it is often loosely or colloquially described as being such.[10][11][12]

Dimensions

The length of the wall was 80 Roman miles (a unit of length equivalent to about 1,620 yards or 1,480 metres), or 73 modern miles (117 kilometres).[13] This covered the entire width of the island, from Wallsend on the River Tyne in the east to Bowness-on-Solway in the west.[2] Not long after construction began on the wall, its width was reduced from the originally planned 10 feet (3.0 m) to about 8 feet (2.4 m), or even less depending on the terrain.[2] As some areas were constructed of turf and timber, it would take decades for certain areas to be modified and replaced by stone.[2] Bede, a medieval historian, wrote that the wall stood 12 feet (4 metres) high, with evidence suggesting it could have been a few feet higher at its formation.[2] R. S. O. Tomlin argues that along the miles-long wall there would have been a tower every third of a mile, adding more to the dimensions of the structure, as evident by the plentiful remains of the turrets.[14]

Route

Hadrian's Wall extended west from Segedunum at Wallsend on the River Tyne, via Carlisle and Kirkandrews-on-Eden, to the shore of the Solway Firth, ending a short but unknown distance west of the village of Bowness-on-Solway.[15] The route was slightly north of Stanegate, an important Roman road built several decades earlier to link two forts that guarded important river crossings: Corstopitum (Corbridge) on the River Tyne and Luguvalium (Carlisle) on the River Eden. The modern A69 and B6318 roads follow the course of the wall from Newcastle upon Tyne to Carlisle, then along the northern coast of Cumbria (south shore of the Solway Firth). Part of the central section of the wall follows natural cliffs on an escarpment of the Whin Sill rock formation. Although the curtain wall ends near Bowness-on-Solway, this does not mark the end of the line of defensive structures. The system of milecastles and turrets is known to have continued along the Cumbria coast as far as Risehow, south of Maryport.[16] For classification purposes, the milecastles west of Bowness-on-Solway are referred to as Milefortlets.

Purpose of construction

Hadrian's Wall was probably planned before Hadrian's visit to Britain in 122. According to restored sandstone fragments found in Jarrow which date from 118 or 119, it was Hadrian's wish to keep "intact the empire", which had been imposed on him via "divine instruction".[17] One comment on the military purpose of the wall was that, "if there are troublesome tribes to the north, and you want to keep them out, you build a strong defensive wall".[2] The Historia Augusta also states that Hadrian was the first to build a wall 80 miles (130 km) from sea to sea to separate the barbarians from the Romans.[2] However, this reasoning may not entirely explain all the various motivations Hadrian could have had in mind when commissioning the wall's construction.[2]

On Hadrian's accession to the imperial throne in 117, there was unrest and rebellion in Roman Britain and from the peoples of various conquered lands across the Empire, including Egypt, Judea, Libya and Mauretania.[17] These troubles may have influenced his plan to construct the wall, as well as his construction of frontier boundaries now known as limes in other areas of the Empire, such as the Limes Germanicus in modern-day Germany. Scholars disagree over how much of a threat the inhabitants of northern Britain really presented to the Romans, and whether there was any economic advantage in defending and garrisoning a fixed line of defences like the wall, rather than conquering and annexing what has become Northumberland and the Scottish Lowlands and then defending the territory with a looser arrangement of forts.[17] Besides a defensive structure made to keep people out, the wall also kept people within the Roman province.[2] Since the Romans had control over who was allowed in and out of the empire, the wall was invaluable in controlling trading and the economy.[2] The wall also had a psychological impact: For nearly three centuries, until the end of Roman rule in Britain in 410 AD, Hadrian's Wall was the clearest statement of the might, resourcefulness, and determination of an individual emperor and of his empire.[2]

The Wall also provided years of work for thousands of soldiers who were responsible for building and maintaining the structure, which gave the further benefit of preventing any boredom for the soldiers.[2] It would appear that the wall's primary purpose was as a physical barrier to slow the crossing of raiders and people intent on getting into the empire for destructive or plundering purposes.[2] "And so, having reformed the army quite in the manner of a monarch, he set out for Britain, and there he corrected many abuses and was the first to construct a wall, eighty miles in length, which was to separate the barbarians from the Romans." *Historia Augusta, Life of Hadrian 11.2.*

Hadrian's Wall was not only a defensive structure but also a symbolic statement of Rome's imperial power marking the border between the so called civilized world and the unconquered barbarian wilderness. As the British archaeologist Neil Faulkner explains, "the wall, like other great Roman frontier monuments was as much a propaganda statement as a functional facility".[18] It may be that it was not a last-stand type of defensive line, but, instead, an observation point that could alert Romans of an incoming attack and act as a deterrent to slow down enemy forces so that additional troops could arrive for support.[2] This view is supported by another defensive measure frequently found on the berm or flat area in front of the wall: pits or holes known as cippi pits[19] which held branches or small tree trunks entangled with sharpened branches (these were the 'cippi').[2] The use of such thorns and sharpened stakes was clearly an anti-personnel measure, and might be thought of as the Roman equivalent of barbed wire. Once its construction was finished, there is some evidence that Hadrian's Wall was covered in plaster and then whitewashed: its shining surface would have reflected the sunlight and been visible for miles around.[17]

Construction

Hadrian ended his predecessor Trajan's policy of expanding the empire and instead focused on defending the current borders, namely at the time Britain.[2] Like Augustus, Hadrian believed in exploiting natural boundaries such as rivers for the borders of the empire, for example the Euphrates, Rhine and Danube.[2] Britain, however, did not have any natural boundaries that could serve this purpose – to divide the province controlled by the Romans from the Celtic tribes in the north.[2]

With construction starting in 122,[20] the entire length of the wall was built with an alternating series of forts, each housing 600 men, and manned milecastles, operated by "between 12 and 20 men".[2] It took six years to build most of Hadrian's Wall with the work coming from three Roman legions – the Legio II Augusta, Legio VI Victrix, and Legio XX Valeria Victrix, totalling 15,000 soldiers, plus some members of the Roman fleet.[2] The building of the wall was not out of the area of expertise for the soldiers; some would have trained to be surveyors, engineers, masons, and carpenters.[2]

"Broad Wall" and "Narrow Wall"

R. G. Collingwood cited evidence for the existence of a broad section of the wall and conversely a narrow section.[21] He argued that plans changed during construction of the wall and its overall width was reduced.[21] Broad sections of the wall are around nine and a half feet (2.9 metres) wide with the narrow sections two feet (60 centimetres) thinner, around seven and a half feet (2.3 metres) wide.[21] The narrow sections were found to be built upon broad foundations.[21] Based on this evidence, Collingwood concluded that the wall was originally due to be built between present-day Newcastle and Bowness, with a uniform width of ten Roman feet, all in stone.[21] In the end, only three-fifths of it was built from stone and the remaining part in the west was a turf wall, later rebuilt in stone.[21] Plans possibly changed due to a lack of resources.[21]

In an effort to preserve resources further, the eastern half's width was therefore reduced from the original ten Roman feet to eight, with the remaining stones from the eastern half used for around 5 miles (8 kilometres) of the turf wall in the west.[21][14] This reduction from the original ten Roman feet to eight, created the so-called "Narrow Wall".[14]

The Vallum

Just south of the wall there is a ten-foot (3-metre) deep, ditch-like construction with two parallel mounds running north and south of it, known as the Vallum.[21] The Vallum and the wall run more or less in parallel

for almost the entire length of the wall, except between the forts of Newcastle and Wallsend at the east end, where the Vallum may have been considered superfluous as a barrier on account of the close proximity of the River Tyne. The twin track of the wall and Vallum led many 19th-century thinkers to note and ponder their relation to one another.[21]

Some evidence appears to show that the route of the wall was shifted to avoid the Vallum, possibly pointing to the Vallum being an older construction.[21] R. G. Collingwood therefore asserted in 1930 that the Vallum was built before the wall in its final form.[21] Collingwood also questioned whether the Vallum was an original border built before the wall.[21] Based on this, the wall could be viewed as a new, replacement border, built to strengthen the Romans' definition of their territory.[21]

In 1936, further research suggested that the Vallum could not have been built before the wall because the Vallum avoided one of the Wall's milecastles.[21] This new discovery was continually supported by more evidence, strengthening the idea that there was a simultaneous construction of the Vallum and the wall.[21]

Other evidence still pointed in other, slightly different directions. Evidence shows that the Vallum preceded sections of the Narrow Wall specifically; to account for this discrepancy, Couse suggests that either construction of the Vallum began with the Broad Wall, or it began when the Narrow Wall succeeded the Broad Wall but proceeded more quickly than that of the Narrow Wall.[21]

Turf wall

From Milecastle 49 to the western terminus of the wall at Bowness-on-Solway, the curtain wall was originally constructed from turf, possibly due to the absence of limestone for the manufacture of mortar.[22] Subsequently, the Turf Wall was demolished and replaced with a stone wall. This took place in two phases; the first (from the River Irthing to a point west of Milecastle 54), during the reign of Hadrian, and the second following the reoccupation of Hadrian's Wall after the abandonment of the Antonine Wall (though it has also been suggested that this second phase took place during the reign of Septimius Severus). The line of the new stone wall follows the line of the turf wall, apart from the stretch between Milecastle 49 and Milecastle 51, where the line of the stone wall is slightly further to the north.[22]

In the stretch around Milecastle 50TW, it was built on a flat base with three to four courses of turf blocks.[23] A basal layer of cobbles was used westwards from Milecastle 72 (at Burgh-by-Sands) and possibly at Milecastle 53.[24] Where the underlying ground was boggy, wooden piles were used.[22] At its base, the now-demolished turf wall was 6 metres (20 feet) wide, and built in courses of turf blocks measuring 46 cm (18 inches) long by 30 cm (12 inches) deep by 15 cm (6 inches) high, to a height estimated at around 3.66 metres (12.0 feet). The north face is thought to have had a slope of 75%, whereas the south face is thought to have started vertical above the foundation, quickly becoming much shallower.[22]

Standards

Above the stone curtain wall's foundations, one or more footing courses were laid. Offsets were introduced above these footing courses (on both the north and south faces), which reduced the wall's width. Where the width of the curtain wall is stated, it is in reference to the width above the offset. Two standards of offset have been identified: Standard A, where the offset occurs above the first footing course, and Standard B, where the offset occurs after the third (or sometimes fourth) footing course.[25]

Garrison

It is thought that following construction, and when fully manned, almost 10,000 soldiers were stationed on Hadrian's Wall, made up not of the legions who built it but by regiments of auxiliary infantry and cavalry drawn from the provinces.[2] Following from this, David Breeze laid out the two basic functions for soldiers on or around Hadrian's Wall.[26] Breeze says that soldiers who were stationed in the forts around the wall had the primary duty of defence; at the same time, the troops in the milecastles and turrets had the responsibility of frontier control.[26] Evidence, as Breeze says, for soldiers stationed in forts is far more pronounced than the ones in the milecastles and turrets.[26]

Breeze discusses three theories about the soldiers on Hadrian's Wall. One, these soldiers who manned the milecastles and turrets on the wall came from the forts near it; two, regiments from auxiliaries were specifically chosen for this role; or three, "a special force" was formed to man these stations.[26] Breeze comes to the conclusion that through all the inscriptions gathered there were soldiers from three, or even four, auxiliary units at milecastles on the wall.[26] These units were "cohors I Batavorum, cohors I Vardullorum, an un-numbered Pannonian cohort, and a duplicarius from Upper Germany".[26] Breeze adds that there appears to have been some legionaries as well at these milecastles.[26]

Breeze also continues saying that evidence is "still open on whether" soldiers who manned the milecastles were from nearby forts or were specifically chosen for this task, and further adds that "the balance [of evidence] perhaps lies towards the latter".[26] A surprise for Breeze is that "soldiers from the three British legions" outnumbered the auxiliaries, which goes against the assertion "that legionaries would not be used on such detached duties".[26] Further information on the garrisoning of the wall has been provided by the discovery of the Vindolanda tablets just to the south of Hadrian's Wall, such as the record of an inspection on 18 May 92 or 97, when only 456 of the full quota of 756 Belgae troops were present, the rest being sick or otherwise absent.[27]

After Hadrian

After Hadrian's death in 138, the new emperor, Antoninus Pius, left the wall occupied in a support role, essentially abandoning it. He began building the Antonine Wall about 160 kilometres (100 mi) north, across the isthmus running west-south-west to east-north-east. This turf wall ran 40 Roman miles, or about 60.8 km (37.8 mi), and had more forts than Hadrian's Wall. This area later became known as the Scottish Lowlands, sometimes referred to as the Central Belt or Central Lowlands.

Antoninus was unable to conquer the northern tribes, so when Marcus Aurelius became emperor, he abandoned the Antonine Wall and reoccupied Hadrian's Wall as the main defensive barrier in 164. In 208–211, the Emperor Septimius Severus again tried to conquer Caledonia and temporarily reoccupied the Antonine Wall. The campaign ended inconclusively and the Romans eventually withdrew to Hadrian's Wall. The early historian Bede (AD 672/73–735), following Gildas, wrote (circa AD 730): *[the departing Romans] thinking that it might be some help to the allies [Britons], whom they were forced to abandon, constructed a strong stone wall from sea to sea, in a straight line between the towns that had been there built for fear of the enemy, where Severus also had formerly built a rampart. — Bede, Historia Ecclesiastica gentis Anglorum, Book I Chapter 12*

Bede obviously identified Gildas's stone wall as Hadrian's Wall (built in the 120s) and he would appear to have believed that the ditch-and-mound barrier known as the Vallum (just to the south of, and contemporary with, Hadrian's Wall) was the rampart constructed by Severus. Many centuries would pass before just who built what became apparent.[29][self-published source?] In the same passage, Bede describes Hadrian's Wall as follows: "It is eight feet in breadth, and twelve in height; and, as can be clearly seen to this day, ran straight from east to west." Bede by his own account[30] lived his whole life at Jarrow, just across the River Tyne from the eastern end of the Wall at Wallsend, so as he indicates, he would have been very familiar with the Wall. What he does not say is whether there was a walkway along the top of the wall. It might be thought likely that there was, but if so it no longer exists.

In the late 4th century, barbarian invasions, economic decline and military coups loosened the Empire's hold on Britain. By 410, the estimated end of Roman rule in Britain, the Roman administration and its legions were gone and Britain was left to look to its own defences and government. Archaeologists have revealed that some parts of the wall remained occupied well into the 5th century. It has been suggested that some forts continued to be garrisoned by local Britons under the control of a Coel Hen figure and former dux. Hadrian's Wall fell into ruin and over the centuries the stone was reused in other local buildings. Enough survived in the 7th century for spolia from Hadrian's Wall to find its way into the construction of St Paul's Church in Monkwearmouth-Jarrow Abbey, where Bede was a monk. It was presumably incorporated before the setting of the church's dedication stone, still to be seen in the church, dated 23 April 685.[31]

The wall fascinated John Speed, who published a set of maps of England and Wales by county at the start of the 17th century. He described it as "the Picts Wall" (or "Pictes"; he uses both spellings). A map of Newecastle (sic), drawn in 1610 by William Matthew, described it as "Severus' Wall", mistakenly giving it the name ascribed by Bede to the Vallum. The maps for Cumberland and Northumberland not only show the wall as a major feature, but are ornamented with drawings of Roman finds, together with, in the case of the Cumberland map, a cartouche in which he sets out a description of the wall itself.

Preservation by John Clayton

Much of the wall has now disappeared. Long sections of it were used for roadbuilding in the 18th century,[32] especially by General Wade to build a military road (most of which lies beneath the present day B6318 "Military Road") to move troops to crush the Jacobite rising of 1745. The preservation of much of what remains can be credited to the antiquarian John Clayton. He trained as a lawyer and became town clerk of Newcastle in the 1830s. He became enthusiastic about preserving the wall after a visit to Chesters. To prevent farmers taking stones from the wall, he began buying some of the land on which the wall stood. In 1834, he started purchasing property around Steel Rigg near Crag Lough. Eventually, he controlled land from Brunton to Cawfields. This stretch included the sites of Chesters, Carrawburgh, Housesteads, and Vindolanda. Clayton carried out excavation at the fort at Cilurnum and at Housesteads, and he excavated some milecastles.

Clayton managed the farms he had acquired and succeeded in improving both the land and the livestock. He used the profits from his farms for restoration work. Workmen were employed to restore sections of the wall, generally up to a height of seven courses. The best example of the Clayton Wall is at Housesteads. After Clayton's death, the estate passed to relatives and was soon lost to gambling. Eventually, the National Trust began acquiring the land on which the wall stands. At Wallington Hall, near Morpeth, there is a painting by William Bell Scott, which shows a centurion supervising the building of the wall. The centurion has been given the face of John Clayton (above right).

Later discoveries

In 2021 workers for Northumbrian Water found a previously undiscovered 3 metres (9.8 ft) section of the wall while repairing a water main in central Newcastle upon Tyne. The company announced that the pipe would be "angled to leave a buffer around the excavated trench".[33][34]

World Heritage Site

Hadrian's Wall was declared a World Heritage Site in 1987, and in 2005 it became part of the transnational "Frontiers of the Roman Empire" World Heritage Site, which also includes sites in Germany.[35]

Tourism

Although Hadrian's Wall was declared a World Heritage Site in 1987, it remains unguarded, enabling visitors to climb and stand on the wall, although this is not encouraged, as it could damage the historic structure. On 13 March 2010, a public event Illuminating Hadrian's Wall took place, which saw the route of the wall lit with 500 beacons. On 31 August and 2 September 2012, there was a second illumination of the wall as a digital art installation called "Connecting Light", which was part of the London 2012 Festival. In 2018, the organisations which manage the Great Wall of China and Hadrian's Wall signed an agreement to collaborate for the growth of tourism and for historical and cultural understanding of the monuments.[36]

Hadrian's Wall Path

In 2003, a National Trail footpath was opened that follows the line of the wall from Wallsend to Bowness-on-Solway.[37] Because of the fragile landscape, walkers are asked to follow the path only in summer.[38]

Roman-period names

Hadrian's Wall was known in the Roman period as the vallum (wall), and the discovery of the Staffordshire Moorlands Pan (pictured below right) in Staffordshire in 2003 has thrown further light on its name. This copper alloy pan (trulla) from the 2nd century is inscribed with a series of names of Roman forts along the western sector of the wall: mais [Bowness-on-Solway] coggabata [Drumburgh] vxelodvnvm [Stanwix] camboglanna

[Castlesteads]. This is followed by the words rigore vali aeli draconis. Hadrian's family name was Aelius, and the most likely reading of the inscription is Valli Aelii (genitive), Hadrian's Wall, suggesting that the wall was called by the same name by contemporaries. However, another possibility is that it refers to the personal name Aelius Draco.[39][40]

Two bronze vessels that are very similar to the Staffordshire Moorlands Pan are the Rudge Cup, found in Wiltshire in 1725, and the Amiens Skillet, found in Amiens in northern France in 1949. They also bear the Latin names of Hadrian's Wall forts round their rims, beneath which are representations of a turreted or battlemented wall, thought to depict Hadrian's Wall.

Forts
The Latin and Romano-Celtic names of all of the Hadrian's Wall forts are known, from the Notitia Dignitatum and other evidence such as inscriptions. They are listed here from east to west, in their Latin and modern

English names:
Segedunum (Wallsend)
Pons Aelius (Newcastle upon Tyne)
Condercum (Benwell Hill)
Vindobala (Rudchester)[42]
Hunnum (Halton Chesters)[42]
Cilurnum (Chesters aka Walwick Chesters)[42]
Procolita (Carrowburgh)
Vercovicium (Housesteads)
Aesica (Great Chesters)[42]
Magnis (Carvoran)
Banna (Birdoswald)
Camboglanna (Castlesteads)
Uxelodunum (Stanwix. Also known as Petriana)
Aballava (Burgh-by-Sands)
Coggabata (Drumburgh)
Mais (Bowness-on-Solway)

Turrets on the wall include:
Leahill Turret
Denton Hall Turret
Outpost forts beyond the wall include:

Habitancum (Risingham)
Bremenium (High Rochester)[42]
Fanum Cocidi (Bewcastle) (north of Birdoswald)
Ad Fines (Chew Green)[43]

Supply forts behind the wall include:
Alauna (Maryport)
Arbeia (South Shields)
Coria (Corbridge)
Epiacum (Whitley Castle near Alston)
Vindolanda (Little Chesters or Chesterholm)[42]
Vindomora (Ebchester)[42]

In popular culture

Books

The Eagle of the Ninth is a celebrated children's novel by Rosemary Sutcliff, published in 1954. It tells the story of a young Roman officer venturing north beyond Hadrian's Wall in search of the missing Eagle standard of the lost Ninth Legion. It was inspired by the bronze Silchester eagle found in 1866. The book itself inspired the 2011 film The Eagle.

The Jim Shepard short story collection Like You'd Understand Anyway (2007) includes a story titled "Hadrian's Wall" which is an imagined account of a clerk living and working during the wall's construction.[44]

Nobel Prize-winning English author Rudyard Kipling contributed to the popular image of the "Great Pict Wall" in his short stories about Parnesius, a Roman legionary who defended the wall against the Picts. These stories are part of the Puck of Pook's Hill anthology, published in 1906.[45]

American author George R. R. Martin has acknowledged that Hadrian's Wall was the inspiration for the Wall in his best-selling series A Song of Ice and Fire, dramatized in the fantasy TV series Game of Thrones, in which the wall is also in the north of its country and stretches from coast to coast.[46]

In M. J. Trow's fictional Britannia series, Hadrian's Wall is the central location, and Coel Hen and Padarn Beisrudd are portrayed as limitanei (frontier soldiers).[47]

Hadrian's Wall by Adrian Goldsworthy is a short history of the wall.[48]

Films

The 1991 American romantic action adventure film Robin Hood: Prince of Thieves uses Sycamore Gap as a location.[49]

The 2011 action drama film The Eagle tells the story of a young Roman officer setting out across Hadrian's Wall into the uncharted highlands of Caledonia to recover the lost Roman eagle standard of the Ninth Legion.[citation needed] The 2010 film Centurion tells a similar story.

The wall has also been featured as a major focal point of the 2004 King Arthur in which one of the primary gates is opened for the first time since its construction to allow Arthur and his knights passage into the north for their quest. The climactic Battle of Badon between the Britons led by Arthur and his knights, and the Saxons led by Cerdic and his son Cynric are set just inside the wall.

Music

The opening track from Maxim's first solo album Hell's Kitchen is named "Hadrian's Wall".[50]

Television

The seventh episode for the eighth season of the documentary television series Modern Marvels was about Hadrian's Wall.[51] It was released on 1 March 2001.[51]

Poetry

The English poet W. H. Auden wrote a script for a BBC radio documentary called Hadrian's Wall, which was broadcast on the BBC's north-eastern Regional Programme in 1937. Auden later published a poem from the script, "Roman Wall Blues", in his book Another Time. The poem is a brief monologue spoken in the voice of a lonely Roman soldier stationed at the wall.[52]

Video games

Hadrian's Wall appears in Assassin's Creed Valhalla. The site can be visited by protagonist Eivor of the Raven Clan during the 870s.[53]

Board games

A board game with the same name was released in 2021, in which you are tasked with the construction and defence of the wall.[54] In 2022 the game was nominated for the American Tabletop Awards in the Strategy Game category.[55]

Note: For references, please see website shown at beginning of this article.

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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.

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