

Ancient Persians first to use gas in wars

In a study presented to the Archaeological Institute of America, a UK researcher said he found evidence that the Persian Empire engaged in chemical warfare against their enemies.

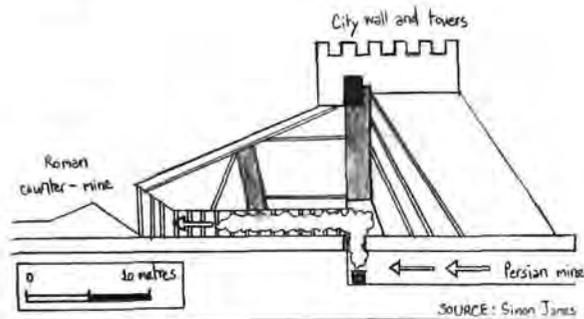


Diagram of the mine

The findings show that ancient Persians used poisonous gases on the Roman city of Dura, Eastern Syria, in the 3rd Century AD.

At the base of the city wall, the remains of some twenty Roman soldiers have been uncovered.

The study also shows that a mine was excavated under the wall, and the Persians ignited bitumen and sulphur crystals to produce dense poisonous gases.

Remains in the city wall indicate that toxic gases were used in a siege on the city



In historical records, Dura was eventually attacked and abandoned.

Well-preserved ruins were discovered by Indian troops, and the structures were excavated by French and American researchers in the 1920s and 1930s.

Sea monster Predator X

Researchers believe that a giant Arctic marine creature fossil had a bite that could have been able to crush a 4 x 4 car.

They say that the 15 metre-long reptile had a bite force of approximately 45 tonnes per square inch. The sea monster is known as "Predator X", and lived in the oceans about 147 million years ago.



Researchers believe 'Predator X' could have preyed on other reptiles

Linked to a new species of pliosaur (large, short-necked reptiles existing during the era of dinosaurs), the size of Predator X has astonished scientists.

It is bigger than 'The Monster', a fossil pliosaur found in Svalbard.

The twentyone-metre-long ichthyosaur, *Shonisaurus sikanniensis* (Triassic Period), is the largest sea creature on record.

Dino feathers 'for show only'

A new study finds that the earliest dinosaur feathers might be for visual display.

Two 125-million-year-old dinosaur fossils excavated in northeast China contain evidence to support the theory as well as add to knowledge on the origin of feathers.

Scientists were of the view that the feathers could not have been used for flight or for keeping warm, but have not offered an explanation of their primary function.

The long feather is characterized by its single and unbranched filament, and found on parts of the body that are normally used for ornamentation in birds today.

Art installation causes controversy

An art installation at the European Council building in Brussels has provoked strong reactions from EU members.

Titled 'Entropa', the work portrays various countries in what many view as "lampoons of national stereotypes".



Eight-tonne mosaic that depicts France as a country on strike

Bulgaria is represented as a toilet, for example; and France as a country on strike while Romania as a Dracula theme-park.

Germany is portrayed as a motorway network vaguely resembling a swastika, and the UK is not even represented.

Commissioned by the Czech Republic, which holds the EU presidency, with 27 European artists believed to be involved, the art work is created by Czech artist, David Cerny and two partners.

The installation takes up 16 square metres, and commemorates Czech presidency of the EU.

Czech Deputy Prime Minister condemned Mr. Cerny, who has apologised not for the art itself, but for misleading ministers that 27 artists from member states contributed their works.

China fumes over Christie's auction

China has condemned Christie's auction in Paris for the sale of two bronze artefacts taken from a Chinese palace 150 years ago.

The bronzes, which date from 1750, were auctioned as part of the estate of late French designer Yves Saint Laurent.



Rabbit and rat head bronzes of the Qing dynasty were auctioned by Christie's in Paris

China regarded the auction of the bronze rat and rabbit as illegal, and called for a scrutiny of artefacts that Christie's takes out of or into the country.

A Chinese collector, who had clinched the two pieces at a total of US\$ 31m, has refused to pay, as an "act of patriotism."

The state Administration of Cultural Heritage has denied any involvement in the bidding.

China says that the bronze works were part of a collection of 12-animal water-clock fountain

associated with the Chinese Zodiac looted from the imperial old Summer Palace in Beijing when the French and British troops sacked and burnt it in 1860 during the Second Opium War.

Female pharaoh mummy found

Researchers in Egypt have uncovered the remains of a mummy believed to belong to a queen who ruled 4,300 years ago.

Identified as Queen Seshestet, the body was discovered in a pyramid that had been found only recently.

Queen Seshestet was believed to have ruled Egypt for 11 years.

She was the mother of King Teti, founder of the 6th Dynasty.



Egyptologists at work in the burial chamber of Queen Seshestet

Most royal mummies date from dynasties after 1800 BC, and that makes the find of such old royal mummies a rare phenomenon.

The mummy consists of a skull, legs, pelvis and other parts contained in linen, pottery and gold finger wrappings.

In antiquity, almost everything were looted from the burial chamber, including most of the valuables inside the sarcophagus.

South American snake largest in the world

Nature journal has published the finding of fossils belonging to the largest snake on earth.

The bones were uncovered at Cerrejon, Colombia where the world's biggest open-pit coal mines are located.

Researchers have estimated that the snake, Titanoboa, was 13m long – the length of a bus – and weighed over a tonne.

A relative of modern boa constrictors, the creature lived in the rainforest of northeast Colombia about 60 million years ago.

The reptile is reckoned to be so wide as to reach up to the hips of a human being.

Titanoboa's size is helping researchers to determine the earth's temperature in tropical South America between 58 and 60 million years ago.

Archaeologist kept Nefertiti by guile

Documents published recently reveal that a German archaeologist used deception to smuggle to Germany a sculpture of Egyptian queen, Nefertiti.



Sketch impression of the giant snake and its environment



The sculpture of Queen Nefertiti is on display in the Ägyptisches museum, Berlin

The archaeologist, Ludwig Borchardt, registered the bust of the female pharaoh among his discoveries in 1913, and hid it in a box, describing it as a worthless piece of gypsum.

Today, the priceless sculpture in Berlin's Egyptian Museum draws half a million visitors annually.

The document that caused the controversy was found in the German Oriental Institute.

It is an account of a discussion between the archaeologist and an antiquities inspector on the inventory of the archaeological finds.

Borchardt listed the discovery as being made of gypsum when in fact Nefertiti's features were painted on limestone.

Notes from his diary show that he knew of the actual value of the sculpture.

Ancient human foot marks found

Uncovered in Kenya are the earliest footprints indicating modern human foot anatomy and gait.

Attributed to *Homo erectus*, the size and spacing of the prints show evidence of the height, weight and walking behaviour of modern humans.

The footprints were discovered on a small hill in northern Kenya, where the site consists of a great depth of sediment that the team of researchers carefully removed.

Two sets of markings were found, separated by a depth of five metres of sand and volcanic ash.

By comparing surrounding sediment with well-known radioisotope-dated samples from the area, the researchers dated the sediment, and discovered that the two layers of prints were created at least 10,000 years apart.

The discovery is significant for determining the evolution of modern humans in physiology.

The 1.5 million-year-old markings are not the oldest, however; that honour belongs to the 3.1 million-year-old *Australopithecus afarensis* prints which were unearthed in 1978 in Laetoli, Tanzania.

Fish fossil clue to reproductive evolution

A fossil fish unearthed in Australia is believed to be one of the earliest known vertebrates to fertilise eggs inside the female.



The fish sheds light on internal fertilization

The study says that the fossil suggests the fertilization of eggs inside the female evolved sooner than was presumed.

External fertilization of eggs by sperm is thought to have evolved before copulation.

Named *Incisoscutum ritchiei*, the 365 million-year-old specimen is dated to the Upper Devonian Period, and was carrying a 5 cm-long embryo.

The fish has been in the collections of London's Natural History Museum since the 1980s, and was thought to have died soon after eating a smaller fish.

Research generated a reinterpretation that the younger fish was developing in the womb of the fossil find when it died.

Pyramid and tombs found in Egypt

Egyptian archaeologists have discovered another pyramid – the 118th in the country – and two tombs at Saqqara.

They believe that the square-shaped monument might have belonged to the queen mother of King Teti, founder of Egypt's Sixth Dynasty, and tombs to two court officials of Pharaoh Uras.

The entrances of the tombs are decorated with hieroglyphs and carved images.

These 4,300-year-old finds indicate that the sprawling burial site south of Cairo is more extensive than previously assumed.

Peking Man redated

Recent dating analysis suggests that the 'Peking Man' fossils are 200,000 years older than had previously been thought.



Peking Man

The fossils of the Peking man were lost during World War II

The new finding that the famous ancient human fossils from China are approximately 150,000 years old will support efforts to define a more precise timeline for the migration of early humans to Northeast Asia.

The cave system of Zhoukoudian near Beijing, where the Peking Man fossils were unearthed, is one of the world's most significant palaeolithic sites.

Archaeologists discovered tens of thousands of stone tools between 1921 and 1966, including hundreds of fragmentary remains of some 40 early humans, whom palaeontologists have assigned to the species *Homo erectus*.

Attempts to establish the age of the remains have been made problematic by the lack of appropriate methods to date the cave deposits at Zhoukoudian.

New dating techniques, carried out by Guanjun Shen and his team from Nanjing Normal University in China, have been applied.

They were able to obtain a more accurate age for the fossils, with a method based on the radioactive decay of unstable forms (isotopes) of the aluminium and beryllium elements in quartz grains.

Search for Cleopatra's tomb

Teams of archaeologists in Egypt are searching for the tombs of Cleopatra, queen of Egypt, and Mark Antony, the Roman general.

Excavation will be carried out in three sites near a temple west of the coastal city of Alexandria.

A large previously unknown cemetery was discovered near the temple, where last year excavators unearthed the alabaster head of a Cleopatra statue, 22 coins bearing her image, and a mask said to belong to Mark Antony, including 27 tombs and 10 mummies.

The research teams believed that these recent discoveries indicated that Antony and Cleopatra might be buried in the area.

Cleopatra and Mark Antony challenged Caesar Augustus for control of the Roman empire over two millennium ago.



Cleopatra

Cleopatra is known to have killed herself

The lovers committed suicide in 30 BC after their armies were defeated.

Two years ago, a team of Newcastle University experts said that another set of coins suggested that the legendary beauty of Cleopatra and Antony, as portrayed in popular culture, have been exaggerated.

Cleopatra partly African

Egyptian queen Cleopatra is believed to be part African.

Archaeologists discovered the tomb of Cleopatra's sister, Princess Arsinoe, in Ephesus, Turkey, and her remains show that her mother had an 'African' skeleton.

Examinations of the dimensions of Arsinoe's skull indicate characteristics of white Europeans, ancient Egyptians and Black Africans, suggesting that Cleopatra might have descended from mixed race, *Times of London* reported.

When the tomb was first opened in 1926, archaeologists found a sarcophagus which contained a skeleton, the skull that was removed for documentation and study later disappeared during World War II.



Reconstruction of Arsinoe's face has been created with measurements obtained in the 1920s

The find was made by Dr Hilke Thuer of the Austrian Academy of Sciences.

Cleopatra and Arsinoe were daughters of Ptolemy XII by different wives, and had a rivalry between them.

It is believed that the queen ordered her Roman lover Mark Anthony to kill the princess, who died in 41 BC.

Thuer entered the tomb again in the early 1990s, to examine the skeleton, and suspected that she had found the body of Arsinoe.

The Austrian Archaeological Institute requested the Medical University of Vienna to help examine the remains.



Some historians believe Arsinoe was murdered by Cleopatra

A forensic art specialist unit at Dundee University has also created a 3D computer model of Arsinoe, based on the documentation of the remains in Ephesus.

Caroline Wilkinson, a forensic anthropologist leading the unit, helped reconstruct the missing skull with measurements obtained in the 1920s.

Tiny dinosaur found

The smallest known dinosaur has been identified from 6 tiny pelvic bones by Canadian palaeontologists.

About the size of a small chicken, the predator is a cousin to the ferocious Velociraptor.

Named Hesperonychus, it is the tiniest carnivorous dinosaur ever found in North America.

The fossil skeleton, like many Hesperonychus fossils collected since 1982, was mis-identified for more than 25 years as a lizard.

Exquisitely preserved skeletons of small bird-like dinosaurs have been discovered in Asia, but few such fossils have been excavated in Canada, where some of the world's richest sites for large dinosaur bones are found.

It is suspected that small dinosaurs did not thrive in the area where bigger predators dominate.

Fossil reveals whales evolve from land

Fossils of two whales provided clues to how these ancestors to the modern whales evolve from land-based to sea-dwelling mammals.

Found in Pakistan, the discovery consisted of a male and 47.5 million-year-old pregnant female, whose foetal remains were positioned head down, bolstering the belief that the creatures gave birth on land.



Sketch of an artist's conception of a male Maiacetus, ancestors to modern whales

The position of the foetus, allowing it to breathe right after birth, suggests that the animals had not evolve into modern whales which are born tail first to swim right after birth in the water.

Both fossils contained four flipper-like legs that scientists reckoned could have been used for walking short distances on land.

Mammoth skeleton found nearly intact

The almost complete skeleton of a huge Columbian mammoth of the last ice age has been unearthed at a construction site in Los Angeles, USA.

Found by workers who were digging the foundation, the creature belonged to a species of elephant which became extinct near the end of the ice age.



Columbian mammoth fossil has been discovered 80% complete

It is believed to have died 40,000 years ago.

Scientists say that it is likely the skeleton remained intact because enough sediment, sand and debris covered the carcass after the mammoth's death to protect it from predators.

Carbon dating indicates that the mammoth lived between 38,000 and 42,000 years ago.

Thailand returns artefacts to Cambodia

Thai authorities have decided to return seven Khmer artefacts to Cambodia.



Heads of Khmer deities are among the returned relics

The seven sandstone pieces are verified by the Thai Fine Arts Department as belonging to Cambodia, among 43 items believed to have been smuggled into Thailand almost 10 years ago.

Relations between Cambodia and Thailand have been strained by their dispute over the

Preah Vihear temple, and the gesture, in honour of a Thai-Cambodian agreement to return all cultural properties to their respective country of origin, will improve bi-lateral ties.

The seven ancient artefacts are part of the heads of Khmer deities made in the Bayon style.

The Fine Arts Department in Thailand has strengthened its protection of national artefacts amid increased trafficking of its cultural properties, including those of Cambodia and Myanmar.

Intensified efforts would be made to trace the origin of smuggled artefacts that are seized in the country.

It is believed that most collectors involved in the illicit trade are wealthy individuals who intend to decorate their homes, restaurants and offices with antiquities.

Objects from archaeological sites, particularly Buddhist sculptures from the Northeastern part, have been looted and traded.

As part of the tougher measures, more closed-circuit surveillance systems would be installed at national parks and archaeological sites.

8,000 artefacts donated to Mexico

A sensational collection of 8,000 pre-Hispanic artefacts has been donated to Mexico by a private collector.

Sketch drawing of a pre-Hispanic relic displayed in the Xochicalco Archaeological Site Museum, Mexico



Experts say that the private collection of antiquities, some 3,000 years old, is the country's most spectacular, considering the quantity, variety and general condition.

American dentist Miguel Leoff collected the items in the 1940s, which were maintained by his wife, Nadine Vinot.

A clay flute, two Inca pottery works from Peru, a figurine from Guatemala and a figure from Ecuador were some of the most significant items which will now be examined, and later exhibited in Mexico and internationally.

Ms Vinot donated the collection to Mexico last year.

Jakarta Biennale XIII

The Jakarta Biennale, now in its 13th edition, focuses on the Indonesian capital and the spaces within it, art observer Carla Bianpoen reported in *AsiaViews*.

Events and activities are being held in public areas of the city as the organisers, Jakarta Art Council, draws attention to the basic problems encountered by a metropolitan city such as Jakarta and its 10 million residents.

The Jakarta biennale has been regarded as the first in Asia to attend to urban social problems, and its 13th biennale explores the convergence in culture and tradition of art works across Southeast Asia.

Artists participating are from diverse parts such as Malaysia, Thailand, Singapore, Vietnam and the Philippines, Japan Australia, Belgium, France and Spain.

A catalog will be published with contribution of essays from art lecturers, critics and curators, which will include review of Southeast Asian contemporary art history; observation of trends and current issues in the works of young artists in the region; as well as the study of developments of Southeast Asian art infrastructure.

Frieze showing Mayan myth found

Carved stucco panels illustrating the oldest known depictions of a Mayan myth have been unearthed by archaeologists in Guatemala.

The 8m-long panels were produced in about 300 BC, and depict gods, monsters and serpents in scenes from the Popol Vuh Mayan mythology.

Excavators took three months to uncover the carvings at Mirador, the largest ancient Mayan city in the World.

The Maya civilization constructed high temples and sophisticated monuments in central America, and ruled for 2,000 years before mysteriously disappearing and leaving built cities around 900 AD.

A Spanish priest discovered the earliest written version of the Popol Vuh in the early 1700s.

Ancient bead stolen from Museum

An ancient bead bearing the image of a Hindu deity has been stolen from the National Discovery Museum Institute in Thailand, police say.

The 2,000 year-old antiquity with the image of sun god, Surya Dev, measures less than 2cm, and had been kept in a glass box with a magnifying glass for viewers.



Surya Dev image on an ancient stone bead

Investigators report that the theft involved removing the glass, and accessing the artefact through a hole.

A security camera at the exhibition of ancient beads could not help in identifying suspects in the dimly lit display space.

The Surya Dev bead was among 1,000 ancient beads presented at the museum.

Art and galleries revival in Baghdad

Art galleries are reopening in Baghdad six years after the American invasion of Iraq.

Iraqi artists are leading the way to revive their proud tradition in the initial signs of a renaissance of the cultural capital of the Middle East.

Both privately-owned and state galleries in the city have initiated a 4-month season of exhibitions, a practice that started in the 1950s, and interrupted by the war.

Artists do not receive government financial support, but the reduction in violence in the country has been encouraging both artist and art enthusiasts to return to a high level of activity.

Only 3 out of about 60 galleries in Baghdad remained open after the hostilities began in 2003, but today the situation has improved dramatically.

Mysterious queen ruled Canaan

A woman may have once been the queen of the Holy Land, Israeli archaeologists report.

Their discovery is based on a plaque of the Canaanite period, which was excavated in Tal Beth Shemesh, near Jerusalem.

The plaque shows a royal male figure typical in Canaanite and Egyptian art but with a female hair-style and attribute (holding lotus flowers).

Archaeologists have dug up remnants of what they believe was a city of some 1,500 inhabitants.

They say the well-off city that was devastatingly destroyed by violence may have been ruled by the mysterious queen.

Thailand enacts fossil preservation law

Thailand has implemented the country's first legal framework to manage and protect fossils.

The Paleontological Research Protection Act 2008 has strengthened the laws, and brought

new powers in support of efforts to preserve fossils.

According to the Act, a committee will be established under the Mineral Resources Department that will co-operate with the police to investigate suspected vehicles or raid venues without a search warrant.

With the new powers, the authorities have the right to seize fossils, assets or documents.

The new act categorises fossils under three types: commonly-found fossils (mostly invertebrates including corals and shells); rare fossils requiring registration; and fossils (such as dinosaur bones) that the state should appropriate for geological study.

Illustration by Sakulchat Chatrakul Na Ayudhdhaya