Exhibition « Tropical Touraine » - English version

Introduction

Extraordinary animals 15 million years ago

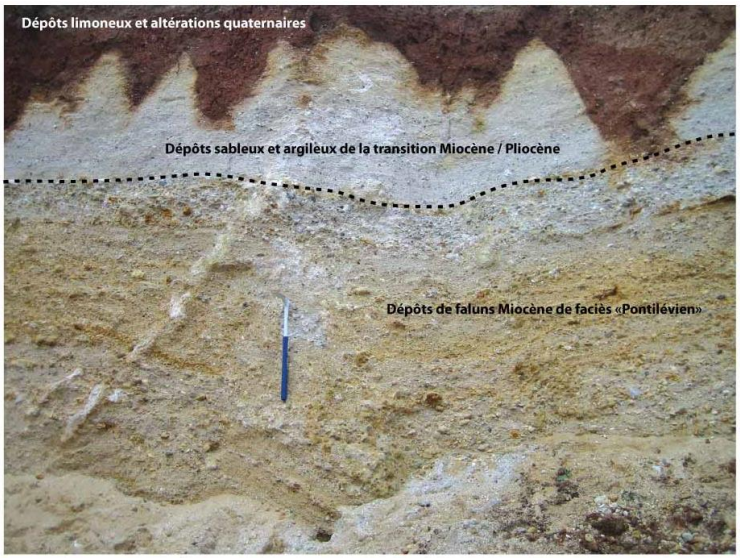
The Miocene is the last known period to be the warmest on our planet. In Touraine, 15.5 million years ago, an average temperature from 4 to 5°C higher than today and a higher humidity encouraged the development of a tropical to subtropical forest. On several occasions, rising sea levels formed a lagoon over much of the departement. These environments were home to a surprising array of flora and fauna.
With the current rise in temperatures, could we soon see a new tropical Touraine?

Geology

Around 15 million years ago, Touraine was totally different from the place we know today. As a result of plate tectonics, the continents were virtually in their current position. The convergence of the Arab-African and Eurasian plates, which began 100 million years ago, increased 23 million years ago. This allowed animals to move from one continent to another. This is when the Alps begin to form.

On three occasions, the Atlantic Ocean invaded Touraine, reaching a vast inland lake that once occupied the eastern part of our region. Such phenomena are called "marine transgressions" and are enhanced by the reactivation of ancient faults draining water through Anjou and Touraine, which were transformed into a vast lagoon. So Brittany became an island.

Successive marine transgressions stirred up the continental sediments deposited by rivers. These sands, mixed with shells and the remains of marine or terrestrial animals, form what geologists call falun. Palaeontologists have studied the fossils that make up these faluns to determine the variety of species that have lived in this lagoon or on its shores, and to deduce past climates.



Climate

During a climatic warming that took place 23 million years ago, flora and fauna adapted to a tropical climate that developed in northern Europe. This "climatic optimum" was maintained between 17 and 14.7 million years ago. It allowed a highly original fauna to spread from Africa and evolve locally, and palaeontologists have been studying its fossils since the end of the 19th century.

Warmer than today's climate (17°C on average per year, compared with 12°C today), the Miocene saw a drop in temperatures and a gradual drying out between 13 and 12 million years ago. This climate change, which began 14 million years ago, is revealed by the transformation of the fauna and shows that animals have adapted to less wooded environments. Dense, damp forests gave way to dry grasslands where the vegetation eaten by animals became tougher.

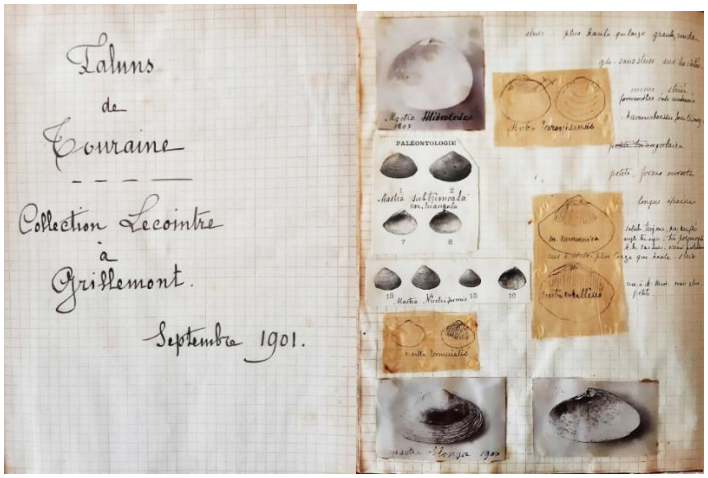
Thus, the Middle Miocene was populated by animals adapted to a luxuriant forest, favourable to discreet ruminants such as cervids (*Dicrocerus),* ruminants (*Palaeomeryx*) or large herbivores capable of crushing fruit and 'soft' plants such *as Anisodon*, *Gomphotherium* or *Deinotherium*. Between 10 and 7 million years ago, cooling coupled with a drying climate favoured the development of a wooded savannah populated by gregarious herbivores that consumed tough vegetation. These open grasslands were also home to species that were better adapted to running, such as the equine *Hippotherium* (formerly *Hipparion)*.

Research & actualism

Research into the Miocene

In the south of Touraine, from the 1890s onwards, Comtesse Henriette LECOINTRE studied the fossils she discovered in the faluns of Touraine. She contacted scientists at the Muséum National d'Histoire Naturelle (MNHN) and the Société des Sciences Naturelles de Blois. Her first publications on faluns date from 1907 and 1910. She passed the baton to her son, Georges LECOINTRE, who bequeathed a large part of his collection to the Musée de la Préhistoire du Grand-Pressigny.

Since then, palaeontologists have been excavating the continental areas around the edge of the Falun Sea. Fossils of animals are not mixed by the sea there, and give a more accurate picture of the succession of Miocene terrestrial species. This research follows in the footsteps of Léonard GINSBURG of the MNHN.
Scientists describe a change in Miocene landscapes from dense, damp forest to drier grassland over a period of around ten million years.



Actualism, a tool to help reconstruct environments of the past

Around 15 million years ago, Touraine had a tropical climate. But how do we know that?
Scientists base their approach on the principle of actualism: environmental conditions throughout the world create living conditions to which plants and animals are adapted. Living beings are therefore reliable indicators of the climate in which they develop. By studying layers of sediment dating from the Miocene, in Pontlevoy (41), Channay-sur-Lathan and Paulmy (37), palaeontologists have found shellfish fossils very similar to those that live nowadays exclusively in the tropical seas of South-East Asia and the Caribbean. It is therefore clear that the Faluns Sea was tropical to subtropical.

The molluscs in this display case illustrate this principle of actualism:
They are displayed in pairs: one of the two shells represents the current species collected in the tropical sea, while the other is a fossil specimen unearthed in Touraine in geological strata from the Middle Miocene. They are closely related animals, adapted to warm waters, but separated by several million years. However, they are not totally identical, because environmental conditions influence species very slowly over millions of years.

The Faluns Sea

Between 16 and 13 million years ago, during the first marine transgression in the Langhian period, a warm, shallow sea (maximum 60 m) covered much of western France, including Touraine. For 2 to 3 million years, it deposited sandy sediments rich in shell fragments that geologists call "falun". Some species of shellfish reveal a warm-water environment, comparable to the tropical and subtropical seas of Senegal or South-East Asia. The presence of fossilised bone fragments and teeth from land animals indicates the proximity of the coast.

This sea was populated by numerous species of molluscs, bryozoans, corals, crustaceans, fishes and marine mammals.

Many of these fish, such as *Sparus* and *Diplodus,* live in warm or temperate waters, while others, such as *Tetraodon*, *Diodon* and *Trigonodon,* are found only in tropical seas, and are currently represented by pufferfish and boxfish. Their teeth, typical of these species that eat bryozoans, corals, molluscs and marine plants, can be found in faluns.
Cetaceans (small whales, dolphins) and other marine mammals (seals *and Metaxytherium*, a type of dugong) lived alongside numerous fishes, including the sawfish (*Pristis*) with its rostrum lined with sharp teeth, and many species of rays and sharks.

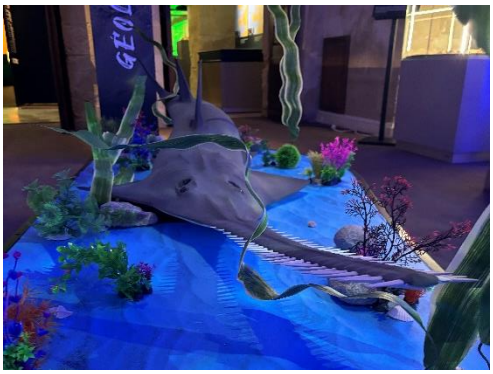
Sea world illustration, Sylvain Guinebaud

Among sharks, large ones such as *Galeocerdo aduncus* (very similar to today's tiger shark) had sharp teeth. They were capable of attacking large prey.

And of course, the largest of the sharks, *Otodus megalodon*, was THE Miocene predator, boasting teeth measuring up to 16 cm in height. Some left traces on the bones of whales that also populated the Falun Sea.

Spinner dolphin
Between 16 and 13 million years (first marine transgression, in the Langhian)

This spinner dolphin is one of two genera identified from their teeth: *Hadrodelphis poseidon* and *Pomatodelphis stenorhynchus*, with a more slender beak. Hadrodelphis appears to be a mammal adapted to the marine environment, while Pomatodelphis is probably an estuary hunter, exploring the sandy or muddy bottoms with its long snout.



Sawfish
Today's sawfish (*Pristis aquitanicus*), related to rays, measures up to 7 meters. It is typical of shallow seas, estuaries and even rivers. It was present in the Falun Sea, as it is today in tropical seas.

Otodus megalodon
From 23 to 3,6 million years
Estimated legnth : 15 meters
Estimated weight : 30 to 50 tonnes

An icon of Palaeontology, the Megalodon is in everyone's mind for its gigantism and above all its impressive teeth from which it takes its name (from the Greek megalo = large / donti = tooth).
Numerous studies dating back to the 2020s have refined our knowledge of this super-predator. Of this giant fish with its cartilaginous skeleton, only very rare fossils of its spinal column remain. Vertebrae identified in Belgium reveal a shark 9.20 m long.
The most widely collected elements are its enormous triangular teeth, the largest from Anjou and Touraine reaching 15 cm in length. These teeth were continuously renewed throughout its life. Its jaw was permanently filled with around 150 teeth in three rows.
Even so, it is difficult to offer a reliable reconstruction of this giant shark. For some scientists, it had the very massive appearance of today's great white shark, while for others its silhouette was more slender, in the proportions of today's mako shark, exceeding 15 m in length.

Whatever the case, its teeth bear witness to the large size of its jaw and the portions of flesh it was able to tear from its prey. Scientists believe that a fish with such a large jaw would have had an enormous energy requirement and would have had to prey on large, fat animals such as cetaceans (whales).

Tooth of *Otodus megalodon*
Restitution in 3D printing (Thibault Taillandier, 2024)
Size 14 cm
The largest known megalodon teeth are 16 cm high. No fish, fossil or modern, has larger teeth.
The serrations (small denticulations on the edges of the tooth) indicate an ability to cut large portions of flesh, rather like a meat knife.
You can touch the tooth, with a delicate touch. Tactile device designed for everyone.

Tropical Atmospheres

Title and accompanying texts for video-projection animations

« The Faluns sea »
About 16 million years ago, a large part of Touraine was occupied by a warm sea about 60 m deep.

« Animals sensitive to the warming of the Middle Miocene »
On land, forests and wetlands supported many species with warm, humid climates.

« The dense tropical forest »
When the sea retreated, the forest expanded and became home to a highly original fauna.

« Towards a world of grasslands »
11 million years ago, a gradual drying out of the climate favoured the development of large grasslands, to which some animals adapted, while others were replaced by better-adapted species.

Faluns

Falun is a sediment formed in shallow seas. It's a mixture of eroded sand, marine shells, fragments of marine and terrestrial animal fossils and fish teeth, all stirred up by the movement of the sea.

Depending on where it was deposited, this sediment is more or less consolidated and contains larger or smaller fossils. Here, three samples of falun from Touraine are presented:

1- Falun Langhien “Pontilévien” collected at Le Louroux (37). Numerous large oysters, Strombus, Cones, Murex (marine conchs), Stewartia incrassata (a bivalve) and other large bivalves and gastropods, rare elsewhere, are present.
2- Falun Langhien “Pontilévien”, “Falun et gravier de Pauvrelay” (Paulmy, 37). Rich in gravel, presence of large Miocene fossils, accompanied by reworked fossils of older fossilized sea sponges (Campanian, late Cretaceous). Indicates the presence of a nearby cliff, eroded by the Falun Sea. In the upper levels, fossil wood (metasequoia Taxodioxylon falunense).
3- Falun Langhien “ Pontilévien ”, “ Sable blanc, fin à Bryozaires ” collected at Ferrière-Larçon (La Placette). Fine sand, rich in fragile colonies of Bryozoans,

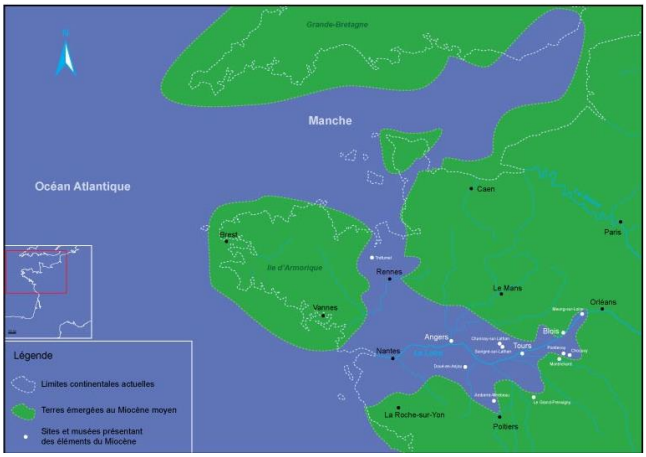
gastropod and bivalve shells, admirably preserved, indicating a calm sea sheltered from waves and violent currents. Many fragile bivalve fossils. No large species.
Samples collected by L. Vaessen.

Explore!

Touraine and its neighbouring departments are rich in Miocene sites. Some of these are open to visitors, such as the Carrière-musée de Channay-sur-Lathan (37), the Perrières de Doué-la-Fontaine (49), the regional geological nature reserve at Pontlevoy (41), the geological reserve at Amberre (86) and the falunière at Choussy (41). The Savigné-sur-Lathan museum (37) and the museums in Tours, Montrichard, Blois, Meung-sur-Loire (45) and Angers also exhibit fossils dating back to the Miocene.

Recreate the relief of the Miocene!

During the Miocene, sea levels fluctuated 3 times, creating a warm, shallow sea on the site of present-day Touraine. Sculpt the sand in this tray to reproduce the advance of the sea. Take your inspiration from the map of the Faluns Sea, formed 16 million years ago.



Schematic map of the Middle Miocene (Langhian) extension of the Falun Sea between 16 and 14 million years ago

Schematic map of the extension of the Falun Sea in the Upper Miocene (Tortonian) between 11 and 7 million years ago

Teachings of the Miocene

The Miocene, a model for climate change

Our planet's climate has always varied, with alternating periods of warmer and colder weather. For example, our current climate has only been in place for around 10,000 years, following an ice age that lasted 100,000 years.
For climate research, the Middle Miocene is a benchmark for modelling the impact of our activities on the future climate. In addition to understanding the workings of our planet, its geology, atmosphere, living species and how they evolve, research enables us to assess the impact of mankind on future climate trends over the medium to long term.

The Miocene, the planet's last warmest period

At that time, CO_2, a greenhouse gas, reached 500 ppm (Part Per Million), almost twice as high as in pre-industrial times (280 ppm around 1800). The average temperature was 4-5°C or even 7°C higher than today.
This rise took about a million years. Animals and plants have adapted to the slow pace of species evolution.

A current rise in CO_2

However, scientists describe a rise in CO_2 levels from 280 ppm to 400 ppm on the planet in ... **150 years**, paving the way for a warming almost as great as that of the Miocene, but **10,000 times faster.** This growth has one main cause: the development of human activities using fossil fuels, which emit large quantities of CO_2 into the atmosphere.
With a CO_2 concentration of 500 ppm, the sea would rise by 60 to 110 cm by 2100, according to the IPCC (Intergovernmental Panel on Climate Change). The sea would still be a long way from Touraine, but we could expect many other changes: more violent and frequent meteorological phenomena, difficulty for low-lying areas draining excess of rain and the "migration" of plant and animal species.

Our current problem is how to adapt quickly, and how not to make the situation worse.

Animals sensitive to Miocene global warming

The Miocene climatic optimum (between 17 and 14.7 million years ago) had a different impact on the continental environments bordering the alluvial plain of an ancient river located on the axis of the present-day Loire, known as the "paleo-Loire".

Between the end of the Palaeogene (23 million years ago) and the beginning of the Miocene (20.4 million years ago), the Centre-Val de Loire region and the south of the Paris Basin were home to numerous lakes and swamp. The sedimentary formations from this geological period contain numerous gastropod fossils (*Planorbes*) as well as a few reptile fossils (crocodiles and turtles) and land mammals (tapirs and Rhinocerotidae).

This environment is ideal for aquatic animals such as crocodiles and a wide variety of freshwater turtles (*Trionyx* and *Chelydropsis*). There were mammals adapted to this environment and temperate climate, including several species closely related to hippopotamuses. Tapirs and hippopotamuses eat algae, grasses and reeds, reflecting the lake or river environment.

Swamp illustration, Sylvain Guinebaud

As soon as the climatic optimum began (+4 to 5°C compared tothe current global temperature), the landscape of this alluvial plain changed. Forests became denser and grasslands took over wetlands. Lake environments became rarer and the river network shrank. As a result, Tapirs and Hippos start to disappear from the region during this period of global warming. At the same time, aquatic reptiles started to decline. Large forms of Crocodilia no longer existed at the start of the climatic optimum, while the last small Crocodilia such as *Diplocynodon* and aquatic turtles survived until the Upper Miocene (9 million years ago). It was not until the climate was milder that certain mammals once again migrated to the banks of the "paleo-Loire", such as a large form of tapir.

The Trionyx turtle
Estimated lenght 1.20 meter
Estimated weight up to 60 kg

This « leather »-shelled aquatic turtle (*Trionychidae* family) still lives today, generally in warm temperate to tropical climates (Asia, Africa, America). Fossilised parts of its shell have been found in Miocene sediments in the region, confirming the tropical climate of the time. Carapace fossils sometimes bear traces of crocodile bites.
Adapted to shallow, sandy or muddy freshwater, it captures fish on the prowl thanks to its extendable neck and its ability to stay underwater for long periods, as it breathes partly through its skin, which captures oxygen from the water.
Fossils dating from the Miocene indicate an average length of 80 cm.

A climate conducive to the diversification of Rhinocerotidae

There are currently five species of rhinoceros in the Rhinocerotidae family worldwide. Rhinocerotidae were known in the Centre-Val de Loire region since the Oligocene (34 million to 23 million years ago) from a few isolated teeth related to the genus *Ronzotherium*, a hornless form of large rhinoceros. Throughout the Miocene (23 million to 5 million years ago), rhinoceroses diversified into eight genera and eleven different species in all existing environments (grasslands, forests, lakeshores and rivers). Smaller forms (*Protaceratherium*, *Plesiaceratherium*), no more than 0.8 m high at the withers, dominate this group in the Lower Miocene. Larger forms, *Brachypotherium brachypus* (Middle-Upper Miocene) and *Diaceratherium aurelianense* (Lower Miocene) are similar in size to modern African rhinoceroses: 1.6 metres at the withers and weighing around two tonnes. It was during the Miocene Climatic Optimum (15 million years ago) that they were most diverse, with seven different species including the large form *Brachypotherium brachypus*.

All these Rhinocerotidae have massive, heterodont ("different teeth") and lophodont ("teeth with transverse ridges") teeth, which enable these mammals to swallow large quantities of plant matter. A study of the traces left by the phytoliths (silica concretions produced by plant cells) of plants on the enamel of their teeth shows that their diet was specialised. Small forms of Rhinoceros feed mainly on herbaceous plants, while large rhinocerotidae have a mixed diet of herbaceous plants, foliage and shrubs.

At the end of the Miocene global warming, rhinoceroses became rare in the Centre-Val de Loire region: only one form (*Dihophus sp.*) is known from a single fossil tooth.

The dense tropical forest

In the Middle Miocene, 16 million years ago, on the shores of the Faluns Sea, a tropical forest made up of a wide variety of plants (Metasequoia, Palm, Acacia, Laurel, Maple, Fern) and animals developed.

This environment, rich in leaves and fruit, is ideal for an agile little monkey, the ***Pliopithecus***. Animals related to elephants, ***gomphotheres*** and the impressive ***dinotheres*** live side by side.

The ***Ampelomeryx*** is subservient in this environment. It resembles an okapi with highly developed ossicones (cranial bony appendages), earning it the nickname "Punk Giraffe".

Deer proliferate in this forest: small antler-less ***Dorcatheriums***, ***Procervulus*** and small-antlered ***Dicrocerus*** are the size of roe deer. Fun fact: all three species have sabre-toothed canines, and the longer their fangs, the shorter their antlers!

A small equid, the ***Anchitherium***, lives in very small groups under this protective vegetation. Its teeth are adapted to the consumption of leaves.

These herbivores are the prey of the ***Amphicyon*** (the size of a lion), the ***Cynelos,*** the rare ***Hyainailouros (***a huge predator weighing around 500 kg) and the ***Miopanthera***, which is agile in trees.

One of the strangest animals in this environment, the gorilla-like ***Anisodon,*** feeds on this vegetation. With its long arms, it pulls branches to its mouth without having to move very far.

Dense forest illustration, Sylvain Guinebaud

Anisodon grande
From 25 Ma to 18 million years for European specimens
From 1.80 m to 2.60 m at the withers
Around 350 kg

The Anisodon is a *Chalicotheriidae*, a large herbivore with a strange posture due to its forelegs being much longer than its hind legs, giving it a gorilla-like gait. Its odd-toed hands and feet resemble rhinoceroses and horses, although they have claws rather than hooves. His massive head is reminiscent of a horse's. Its physique makes it a fantastic emblem of Miocene land animals, on a par with Megalodon in the marine environment.
Its teeth, which are virtually all the same, are adapted to food that is not very abrasive, such as leaves, tree bark and twigs, excluding grasses. These clues suggest that this animal is adapted to a fairly dense and humid tropical forest, but can also evolve in more open environments.
Despite several species in Eurasia and America, the Chalicotheriidae became extinct without any descendants: no current animal can be linked to it. In Europe, the Anisodons disappeared during the Miocene at around -18 millions years, when the climate dried up and the tropical forest disappeared.
This life-size reconstruction was produced by the Société Ophys using a partial skull from the Sansan site (Gers).
In Touraine, its fossil remains are limited to very rare phalanges, a few massive teeth, a mandible and a few limb bones.

Dinotheres, curious proboscideans

During the Miocene, several families of proboscideans lived in Touraine. Among them, the dinothere family is represented by two species: Prodeinotherium bavaricum in the Middle Miocene (15 million years ago) and Deinotherium giganteum in the Upper Miocene (9 million years ago). The latter grew to a height of 5 meters at the withers and weighed between 5 and 10 tonnes.

The fossils discovered in the Centre-Val-de-Loire region consist mainly of dental remains and fragments of tusks, which are imposing in their size. These large animals have a curious pair of lower tusks that curve downwards. Palaeontologists are wondering what their purpose is: twisting and breaking plants for food or simple sexual dimorphism? The imposing teeth are linked to the consumption of tree branches and leaves.

These proboscideans disappeared from Europe during the cooling that followed the Miocene climatic optimum (9 million years ago). Large forms of dinotheres persisted in Africa until the Early Quaternary (1 million years ago).

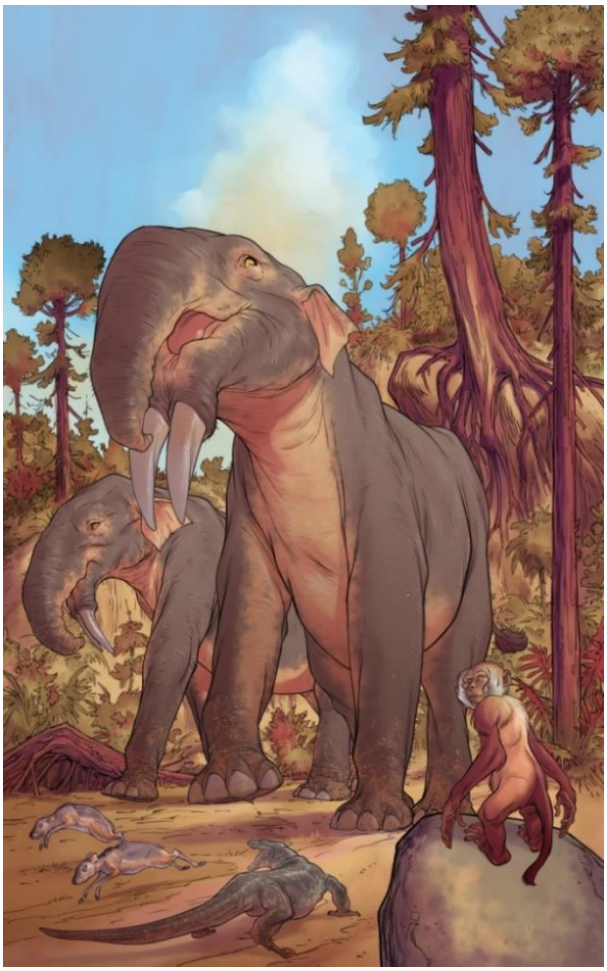


Illustration of Deinothrium, Sylvain Guinebaud

Mastodons in Touraine

Among the large Miocene mammals that lived in Touraine during the climatic optimum (16 to 9 million years ago), two species of mastodon cohabited: the enormous Deinotherium illustrated here and the more common Gomphotherium angustidens.

These proboscideans (animals with a highly mobile proboscis) have elongated bodies, short limbs and low skulls. Their height at the withers does not exceed 3 meters. Their weight varies from 3 to 8 tonnes. Like dinotheres, their bodies are thermoregulated to withstand the high temperatures of a tropical climate.

The etymology of the word 'mastodon' refers to the morphology of their teeth ('ontos'), which are nippled ('mastos'). In the case of ***Gomphotherium angustidens***, they are rectangular and have a large number of well-separated tubercles. These imposing teeth, with enamel up to 4 mm thick, are linked to a diet made up of woody plants (grasses, shrubs) and tough plants (leaves, bark). Their study, as at the Pontlevoy (Loir-et-Cher) and Beaugency (Loiret) sites, provides paleobotanical information about the presence of forests and large meadows.

Like modern elephants, these proboscideans have tusks. However, Gomphotherium has two pairs of straight tusks: one on its upper jaw and a second pair of finer tusks (especially in females) on its lower jaw. The lower ones may be used to uproot plants. The upper tusks are over a meter long in large males.

After the Miocene climatic optimum (15 million years ago), mastodons became rare. The last known fossils in our sector date from the Upper Miocene (9 million years ago). In France, mastodons lasted until the Plio-Pleistocene (2 million years ago), with even larger forms such as ***Anancus arvernensis***.

Skull of *Anisodon grande*
3D printing (Thibault Taillandier, 2024), based on a skull from Sansan (Gers, France, on display at the MNHN)
Anisodon grande skulls are very rare and generally partial or crushed by the weight of the sediment during fossilisation.
You can touch the skull. Tactile device designed for everyone.

Phenakistiscope
Discover the strange walk of the Anisodon by activating the wheel of the phenakistiscope, an instrument invented in the 19th century to reproduce movement from still images.

Molars of adult and juvenile gomphotheres
3D printing (Thibault Taillandier, 2024), based on two original models. Gomphotherans, large animals with trunks in the elephant family, have mamelocut teeth, adapted to eating woody plants (grasses, shrubs) and tough plants (leaves, bark). The name ‘mastodon’ means ‘mamelon tooth’. A comparison of these two teeth shows that there is very significant growth between the juvenile and the adult. The human equivalent of a baby tooth and a wisdom tooth.
It's okay to touch. Tactile device for everyone.

Towards a world of grasslands

Between 14 and 11 million years ago, the climate gradually cooled and the forest thinned. The animals seen previously still occupy this environment, but are adapting, particularly ***dinotheres,*** which are increasing in size. ***Gomphotheres*** seem however to be less present.

Grasslands illustration, Sylvain Guinebaud

From 11 million years ago, as the sea retreated westwards, the climate became drier, favouring the development of grasslands.

A new equid developed there, better adapted to the open environment than to the forest: ***the Hippotherium*** (formerly *Hipparion*). The size of a small horse, its legs still have three hoofed toes. Its teeth indicate the consumption of abrasive grasses typical of today's grasslands. These horses are adapted to racing and form large herds. They live alongside the last Mastodons (including ***the Zygolophodon***), ***giant dinotheres***, massive land tortoises, beavers, tapirs and large predators such as ***the Amphicyon***.

Canine tooth of *Amphicyon giganteus*
3D printing (Thibault Taillandier, 2024).
Amphicyon giganteus is the largest carnivore of the Miocene. A plantigrade, it had more the gait of a bear than a lion. It disappeared without progeny, replaced by the big cats.
Here, the maximum size of a canine tooth has been restored, making it possible to envisage the size of the skull.
You can touch it. Tactile device designed for everyone.

Conclusion

Will we see a tropical Touraine once more?

Given the increase in CO_2 into the atmosphere, we could see a general climate approaching that of the Miocene within a few centuries. But for the moment, scientists are unable to assess the regional impact of this change. The rapid melting of the polar ice caps, including Greenland's, is likely to disrupt the circulation of ocean currents, leading to a cooling in Western Europe despite global warming. The conditions for a "tropical" equilibrium are arising too slowly for us to know.

The rise in temperature due to our CO_2 emissions into the atmosphere is too rapid to give local plant and animal species time to adapt. At best, we could see tropical species already adapted to a warmer, wetter climate taking root here. We would call them invasive, when in fact they would simply be establishing themselves according to the climatic opportunities we are creating for them. They would in turn give rise to new species within a few hundred thousand years.

In the end, while we are likely to experience very different climatic conditions between now and the end of the century, there are too many parameters at play to tell whether the climate here will be tropical.

Credits

A production of the Conseil départemental de l'Indre-et-Loire, 2025

Exhibtion curator

Frédéric DEMOUCHE, responsable du musée de la Préhistoire du Grand-Pressigny

Collections manager

Laure-Anne MILLET-RICHARD

Scientific commitee

Cyril GAGNAISON, palaeontologist, researcher at UniLaSalle
François MAUBERT, geologist
Leonard VAESSEN, palaeontologist, Association des Amis du Musée du Grand-Pressigny

Lenders

Muséum de Blois, Pascal GIRAUDON and Anne-Laure BOUKEF
Musée de Meung-sur-Loire, Charlène GILBERT
Musée du Savignéen, Jean-Claude GAGNAISON
Muséum de Tours, Didier LASTUT
François MAUBERT
Jean-Marie MILLET
Adrien de PERTHUIS
Daniel POUIT
Valentin PRUGNEAUX
Jean-Marie SINTURET
Leonard VAESSEN

Scenography

Atelier TILDE

Lighting design

Tech-Link

Illustrations

Sylvain GUINEBAUD

Many thanks to our colleagues at the Museum of Blois for sharing their documentation on 'La Faërie du Blésois', which greatly simplified our collection searches.

Acknowledgments To the museum team (Maxime CAILLON-MORISSEAU, Valentin PRUGNEAUX, Valérianne CAILLY, Jessy MORVAN, Lisa LACAN, Ophélie et Guillaume PARPAITE-LARGIER, Gilles BOSSE, Aurore BARBIER-DESPREZ, Viviane DOUCET), to colleagues from SCVMMD (Elodie, Pascaline, Laura, Claude, Yannick and David), to electricians, painters and carpenters (Jean-Luc et Jean-Luc, Pierre, Lola, Olivier, Frédéric) from the building Management of CD37, to the Internal Ressources Department and to departmental Archives of the CD37.