Illumisaurus

WIDE EYED EDITIONS

by

Carnovsky

written by

Lucy Brownridge

welcome to the world of the dinosaurs

The earth beneath our feet is a time capsule. Take your *palaeontology lens* to draw back the veil of time and reveal the dinosaurs that once roamed our planet. The ground below us stores the *bones* and *fossils* and *petrified remains* of *prehistoric life* in treasure-like hoards. Get ready to journey back millennia to when dry land was a single, connected mass called *Pangaea*. Watch as it drifts apart over time, nourishing and sustaining powerful dinosaurs, luscious plants, bountiful blossoms and unusual, early mammals. Visit every corner of the globe and see *where in the world* the most famous dinosaurs lived. Step onto *the observation deck* and meet the rich cast of dinosaurs, plants and other prehistoric animals from each place. Learn more about them in the palaeontologist's *species guide.*

What will you discover on your prehistoric adventure around the globe?

CONTENTS

Take a trip around the prehistoric planet.

HOW TO USE THIS BOOK

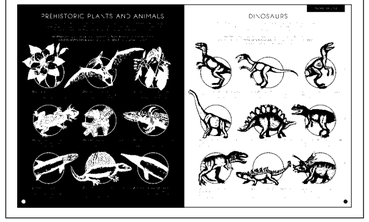
WHERE IN THE WORLD

Visit a *part of the world*, see the lie of the land and discover what a dinosaur habitat would have been like.

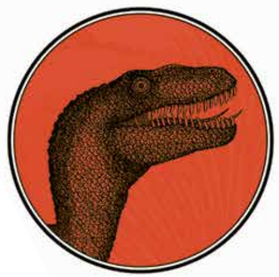
THE OBSERVATION DECK

Step on to the *observation deck*. Tread carefully and watch out for dangerous dinosaurs, ancient plants and unusual creatures.

SPECIES GUIDE



Then, turn the page to learn more about each species, the meaning behind each dinosaur's name and how many million years ago it lived (MYA) in the *species guide.*



Use the *red* lens to reveal the dinosaurs or 'terrible lizards' that would have lived in each location.

Look through the *green* lens to see the location.

Look through the *blue* lens to uncover the plants and prehistoric animals that would have inhabited this place.

THE WORLD

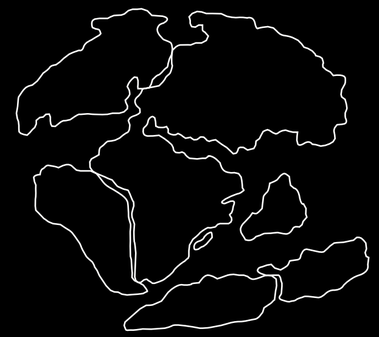
The dinosaurs lived during a time we call the Mesozoic era, which lasted for 186 million years. Scientists split the long Mesozoic era into three stages: the Triassic, Jurassic and Cretaceous periods. Over these periods the world map would have looked very different to the one we recognise today. This is because the Earth's crust is split into big chunks, called tectonic plates, that travel apart very slowly. They are moved by the swirling molten lava beneath them.

The land was once a huge, joined-up super-continent, but over time it split up into the smaller continents we know today. The continents are still drifting apart at a rate of 2.5 centimetres a year.

TRIASSIC PERIOD

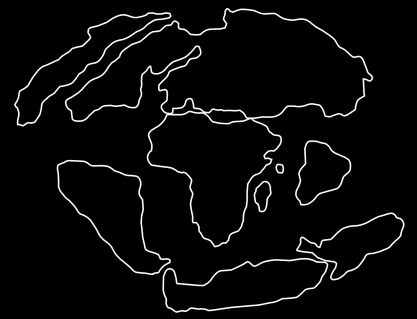
In the Triassic period, the land on Earth was all squashed together in one big super-continent called Pangaea. The word is made from the two Greek words: 'pan' which means whole and 'gaia' which means land. The climate was hot and dry and there were no ice caps. Pangaea was home to the first dinosaurs. There were few of them and they were small. At the end of this period, the land began to split apart.

JURASSIC PERIOD



In the Jurassic period, the land roughly split into two, creating Laurasia in the north and Gondwana in the south. The climate cooled and there was a lot more rain. Because the land was no longer hot and dry, new plants began to flourish and plant-eating dinosaurs could grow bigger. By the end of the Jurassic period, giant sauropods ruled the plains and chomped through lush forests.

CRETACEOUS PERIOD



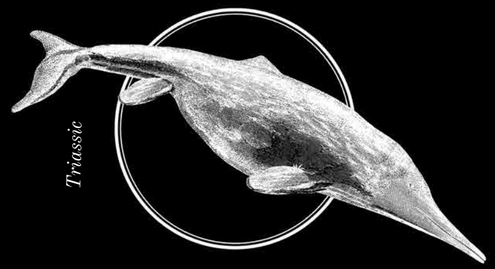
This is known as the golden age of dinosaurs. By this time, the continents had drifted apart significantly. Dinosaurs started to change to suit their climate, environment and the other plants and animals they lived along side. Flowering plants bloomed for the first time, and pollinating insects such as bees began to buzz around the lush forests.

PREHISTORIC PLANTS AND ANIMALS

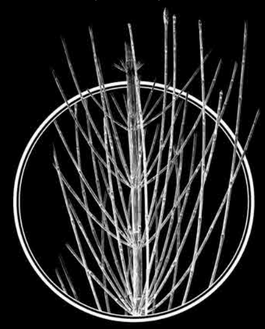
Many insects and animals from the Triassic period perished in a mass extinction. Plants in Jurassic times grew taller as the growing seas around the land made more rain fall. By the Cretaceous period, there were freezing temperatures at the South Pole, the first flowers graced the Earth and pollinating insects such as bees and butterflies appeared.

READ about the key species of plants and animals from each of the three periods, then turn back to the OBSERVATION DECK. Looking through the BLUE lens, what can you see?

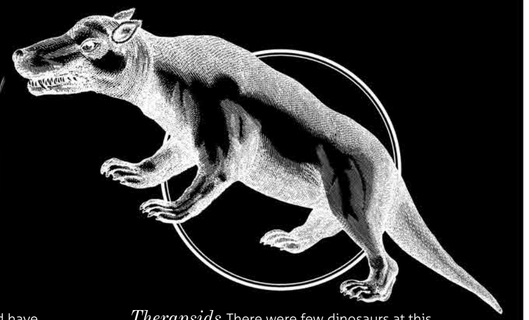
Triassic



Ichthyosaurus This was a family of underwater reptiles that included this *Shonisaurus* and looked a lot like fish.

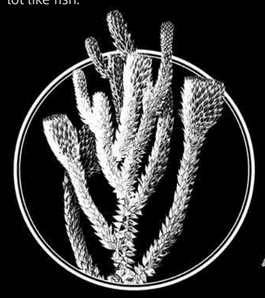


Horsetails These curious plants would have been a large part of the vegetation in the early Triassic period. They are still around today.

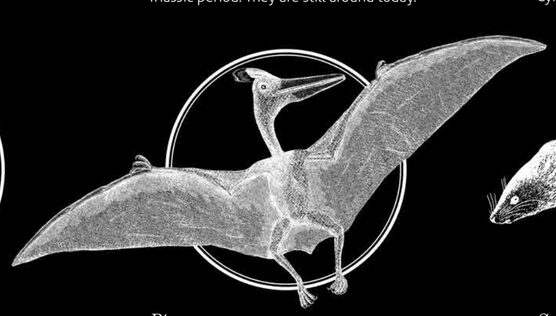


Therapsids There were few dinosaurs at this time but many mammal-like therapsids, such as this *Cynognathus*, roamed Pangaea.

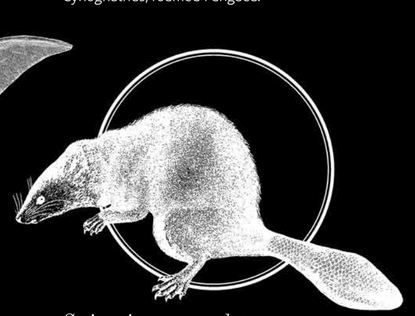
Jurassic



Lush forest As the climate dropped and more rain fell, big lush forests popped up with unusual trees like this monkey puzzle tree.



Pterosaurs Flying reptiles, close relatives of dinosaurs, such as this *Kryptodrakon* started to dominate the Jurassic skies.



Swimming mammals Semi-aquatic mammals like this *Castorocauda* started to appear as the diversity of mammal forms began to explode.

Cretaceous

Pollinating insects These insect newcomers such as nectar-sucking butterflies were critical to the arrival of flowering plants.

Flowering plants such as the tulip tree would have been pollinated by nectar-sucking butterflies and started blooming all over the planet.

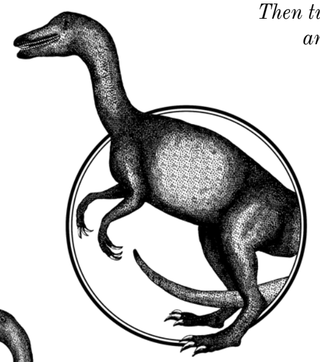
Broad-leaved trees Trees with big leaves, rather than fine needles, like this plane tree started to appear and provided heartier meals for big hungry sauropods.

DINOSAURS

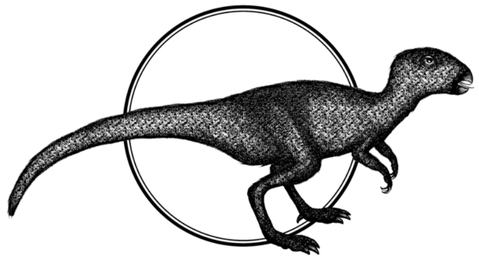
In Triassic times, dinosaurs were relatively small and only made up a small part of life on Earth. After a mass extinction event at the end of the Triassic period the dinosaurs were some of the main survivors and they became more dominant. More diverse species appeared over time as the landmasses drifted apart and they had to adapt to different climates, food and predators. But by the end of the Cretaceous period, dinosaurs had truly conquered every continent.

READ about the key dinosaur developments from different periods around the world. Then turn back to the OBSERVATION DECK. Look through the RED lens and come face to face with the dinosaurs you have learned about.

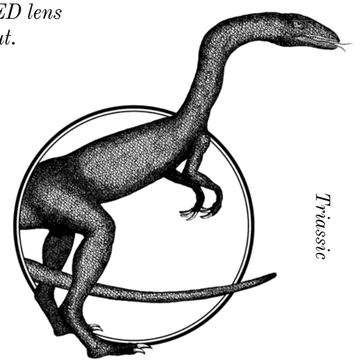
Triassic



Sauropodomorph One of the first groups of dinosaur and this *Saturnalia* is thought to have been one of the earliest.

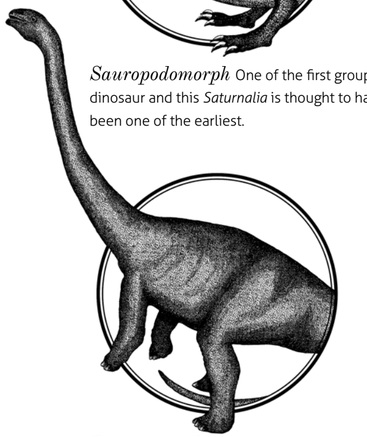


Ornithischians *Pisanosaurus* was one of the first ornithschians and only evolved in the late Triassic period.

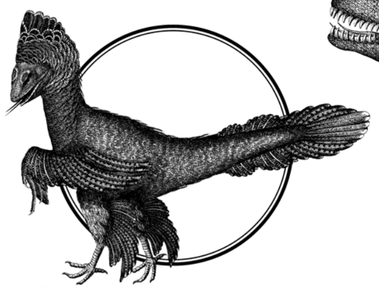


Small theropods The first meat-eating dinosaurs like this *Coelophysis* would have mostly been small scavengers.

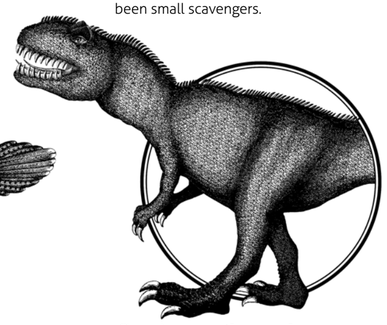
Jurassic



Big sauropods As trees grew taller, so did plant-eating sauropods like this *Diplodocus* so that they could reach the highest leaves.



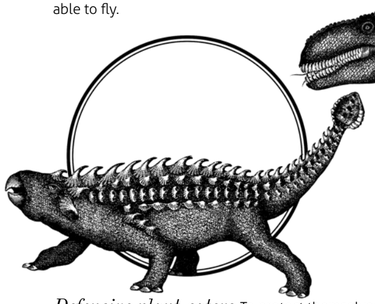
Bird-like theropods Some theropods started to look more like birds. This feathered *Anchiornis* grew wings and feathers but would not have been able to fly.



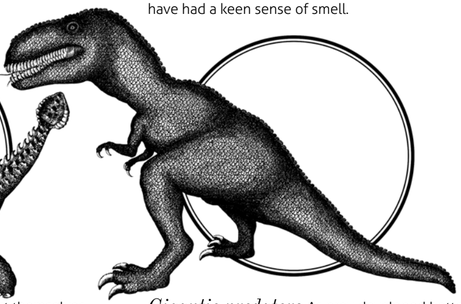
Carnivorous theropods This was the age of the terrifying meat-eaters. They developed bigger bodies, strong leg muscles and this *Yangchuanosaurus* would have had a keen sense of smell.

Cretaceous

Intimidating herbivores Frilled dinosaurs like the *Styracosaurus* would have been spoiling for a fight and were deliberately frilly to look intimidating.



Defensive plant-eaters To protect themselves from predators, herbivores started to grow their own suits of armour, like the *Euoplocephalus* which had a club tail and spikes all over its body.

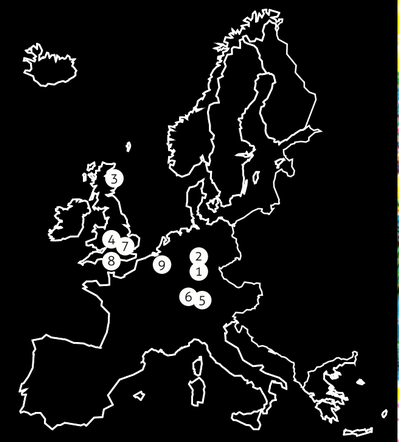


Gigantic predators As prey developed better armour, predators had to become specialised killing machines like this ultra-tough *Carcharodontosaurus*.

WESTERN EUROPE

In the 19th century, Europe was the homeland of fossil hunting and there were rich pickings! The oldest dinosaurs found in Europe are from the late Triassic period which was over 230 million years ago. For over 150 million years, dinosaurs ruled this landmass, prowling the coastlines, hunting, being hunted, surviving and evolving over millennia. If you were to wander around the landscape in the Mid-Triassic period it would be very different to the Europe we know today, although some plants, such as ferns, would be recognisable. The air would be hot and dry as the land of Europe was still a part of Pangaea, and lay close to the Equator. Germany, France and the Jurassic Coast of Dorset and Devon in England are where many of Europe's dinosaurs have been uncovered. Fossils still litter the shores and coastlines there. Many record-breaking discoveries have been made in Europe with over 500 dinosaurs found in a small area of southern Germany alone. The biggest dinosaur footprints were found in eastern France measuring 2 metres in length. The coastlines and mountains of Europe are true dinosaur-hunting territory.

WELCOME TO WESTERN EUROPE



DINOSAUR DISCOVERY SITES

1. *Plateosaurus,* Germany
2. *Liliensternus,* Germany
3. *Saltopus,* Scotland, UK
4. *Megalosaurus,* England, UK
5. *Archaeopteryx,* Germany
6. *Juravenator,* Germany
7. *Baryonyx,* England, UK
8. *Eotyrannus,* Isle of Wight, UK
9. *Iguanodon,* Belgium

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