



## Dinosaurs



If we could work backwards from the animals left to us in the world today, we would find that the story of life on Earth stretches back more than four thousand million years into the past - a span of time which is quite impossible for us to comprehend.

The first life probably began in the seas around 4500 million years ago, then, millions of years later the first creatures crawled out of the water and started to live on the land. It was not until about 500 million years ago that the first animals with backbones (vertebrates) evolved.

During those vast periods of time countless species have evolved, multiplied, declined and vanished forever. Some of the more successful species actually 'dominated' the world for a few million years before they too declined and disappeared.

Today, humans are the dominating species - and yet we have only held this position for a few thousand years. If we continue to exploit our natural resources with no thought of how to sustain our future generations perhaps we may not be the dominant species for much longer!

Reptiles dominated life on land during the Mesozoic era, a period of time which extended from approximately 225 million to 65 million years ago.

By far the most successful of the reptiles were the archosaurs ('ruling reptiles') which included the dinosaurs and the flying reptiles, pterosaurs. The dinosaurs ('terrible reptiles') were divided into two main orders, the Saurischia of which some were herbivores and others carnivores, and the Ornithischia which, as far as we know, were all herbivores. The chief difference in structure between the two kinds of dinosaurs was in the pelvis. Saurischians are often referred to as 'lizard-hipped' reptiles and the Ornithischians as 'bird-hipped'.

The biggest dinosaurs were the giant amphibious saurischians - diplodocus, apatosaurus (once known as brontosaurus) and brachiosaurus. The last named was the biggest land animal the world has ever known -

and a complete skeleton mounted in the Natural History Museum in East Berlin measures 22.7m (74ft - 6ins) in length and stands 6.4m (21ft) at the shoulder - with the head, when raised, situated some 12.8m (42ft) above the ground!

The estimated weight of this huge animal has been computed at 78.26 tonne (77 tons) when alive! Our present day contender for the title of largest land animal, the African elephant, weighs only 5-6 tons and seems quite puny by comparison.

Longest of all the dinosaurs was the diplodocus, with a length of 26.67m (87ft-6ins). This included a neck which was 6.7m (22ft) long, a 4.57m (15ft) body and a tail which measured 15.39m (50ft-6ins). This dinosaur stood 3.58m (11ft-9ins) at the pelvis, the highest point on its body, and weighed about 10.60 tonne (about 10.5 tons).

It is worth mentioning at this point that the blue whale is longer and heavier than any of these 'prehistoric monsters', so we still have the largest animal the world has ever known with us today, although thanks to the attention of the whaling nations, its future is in some doubt. Probably the most terrible of all the numerous species of dinosaur was tyrannosaurus, a huge predatory carnivore which had a length of some 15.39m (50ft-6ins) and stood (in a bipedal crouch position) at a height of about 5.63m (18ft-6ins). The probable weight of tyrannosaurus ('tyrant reptile') has been estimated at 6.78 tonne (about 6.5 tons).

The Age of Reptiles lasted for nearly 200 million years - and then ended comparatively suddenly. As yet, we do not know exactly what killed off the great dinosaurs - but almost certainly it was a sudden and quite catastrophic change in the earth's climate which occurred towards the end of the Cretaceous Period about 65 million years ago.

Perhaps it will be possible one day to discover just what did happen to end the reign of the reptiles after 200 million years as dominating animals. We constantly unearth fossil remains which provide us with more and more information about the animal species of those far off times, so we may yet find the answer to the question that has never been properly answered.

Let us hope that whatever occurred to end the Age of Reptiles does not return to finish off the present 'dominating species'!

