

Lesson 21: Jurassic Period

The **Jurassic** Period, from about 201 to 145 million years ago, was Earth at its most extravagant. Pangea had been splitting apart, and the new inland seas brought warm, wet weather to the continents. Plants grew in abundance everywhere. And the more plants there were, the more food was available, and the larger the animals that ate those plants could grow. In the Jurassic, life pushed the boundaries of size in ways that have never been equaled since.

The giants of this world were the **sauropods**, the enormous long-necked plant-eating dinosaurs. Brachiosaurus, Apatosaurus, Diplodocus: these animals reached lengths of 30 meters or more, and their weight made the ground shake with every step. They were the largest land animals that have ever existed. Their long necks allowed them to browse foliage high in the treetops that no other **herbivore** could reach, effectively giving them a food supply all to themselves. Meanwhile, **carnivores** like Allosaurus stalked the Jurassic landscape, powerful predators in a world of giants.

But land was not the only stage. In the oceans, enormous **marine reptiles** ruled the seas, ichthyosaurs with streamlined, dolphin-shaped bodies, and long-necked plesiosaurs that patrolled near the surface. In the air, **pterosaurs** of many sizes soared on leathery wings. Life had filled every available space, air, land, sea, in a complex interlocking web of relationships. Who ate whom, who depended on whom, who kept whom in check: this is what scientists call a **food web**, and the Jurassic's was one of the most intricate the world had ever seen.

And something almost invisible was happening in the Jurassic that would prove to be among the most important events in life's history. Among some small theropod dinosaurs, the two-legged predators in the shadow of the giants, feathers were appearing. At first perhaps for warmth, perhaps for display, perhaps both. But over generations, some feathered theropods began to glide, and then to fly. The first birds were quietly taking shape in the Jurassic forests, descended from dinosaurs, and they would outlast every giant that ever walked beneath them.