

Lesson 16: The Devonian Period

The **Devonian** Period, from about 419 to 359 million years ago, is called the Age of Fishes for good reason. Fish diversified into an extraordinary variety of forms, including armored fish, early sharks, and ray-finned fish, and a group called **lobe-finned fish** whose strong, fleshy fins were supported by bones arranged like the bones in your arm. At the time, those fins were used to navigate shallow, weedy swamps. But something far more remarkable was beginning at the water's edge.

Some lobe-finned fish began using their fins to push through very shallow water or briefly across mudflats. Over many generations, those fins became more limb-like. One of the most extraordinary fossils ever found captures this transformation: **Tiktaalik**, discovered in the Canadian Arctic, had the scales and gills of a fish but also a neck it could turn, ribs strong enough to support its weight, and fins that worked almost like arms. Tiktaalik is sometimes called a fishapod, neither fully fish nor fully land animal, a snapshot of life in the act of reinventing itself. From creatures like Tiktaalik, the first **tetrapods** evolved: four-limbed vertebrates that could move on land, ancestors of every **amphibian**, reptile, bird, and mammal alive today.

While animals were testing the land, plants were already claiming it. **Vascular plants**, meaning plants with internal tubes to carry water and nutrients upward, had been growing since the Silurian. In the Devonian, they grew tall for the first time, forming the first forests on Earth. These forests produced soil, changed the climate, and pulled carbon from the air. They also evolved **seeds**, protective packages enclosing a plant embryo that could survive dry conditions and germinate later, a remarkable adaptation that freed plants from needing to stay near water.

The Devonian was a period of firsts that changed the planet permanently: first tall forests, first seeds, first four-legged land animals. In geological terms, it happened quickly. And the world on the far side of the Devonian looked nothing like the world before it.