The Cambrian Explosion, occurring 540 million years ago, witnessed a remarkable surge in the diversification of animal life, leading to the emergence of nearly all major animal phyla (Métazoa). This period marked a significant turning point in Earth's history. The colonization of land followed, with arthropods being the first animals to venture onto land, followed by amphibians around 400 million years ago. Vertebrates underwent significant diversification, branching out into diverse groups such as fish, amphibians, reptiles, birds, and mammals, each adapting to specific environments over time