

The reason behind Palaeontologists believing that only about 1% of all the animals that ever lived have been found as fossils today are due factors such evolution, extinction as well as circumstance these organisms had to live through. The earth is home to a wide variety of species. The theory of evolution explains that this diversity is the result of gradual changes in organisms, generation by generation, from remote common ancestors to modern descendants. As many species evolve they may divide into two, and each one then changes developing a new characteristics. Some of the new species may survive and reproduce, their offspring then could differ and develop new characteristics and live on, while others become extinct. Later this process continues over time, the structure, the physiology and the habits of each one are specially adapted to suit its particular life. If an individual is born with genetical changes which improves its ability to survive is more likely to survive and reproduce this could be due to the fact that it was able live in warmer conditions with little fluids or was a smaller size which required smaller portions of food to sustain it. This new favourable characteristic will be passed down to the next generation. We know from fossil record that there have been many tens and hundreds of millions of years of evolution. Therefore we can speculate that if species undergo evolution and it was not favourable and instead these traits were discarded which could have led to their potential extinction.

Remaining fossils of once living organisms scientists find are preserved in rocks formed from mud and sand overtime from erosion of other rocks. Most of these fossils consist of hard shells, spicules, shells and skeletons; soft tissue is rarely found as it decomposed first. Microorganisms called prokaryotes are preserved because they formed onion-like layers of calcium carbonate. Others were preserved in silica solution, which eventually forms flint. These factors enabled the fossilisation of these organisms, other species might not have been under such circumstances leading to their fossils not preserving but decomposing.

Another reason for scientists not finding fossils of other species could be due taxonomic turnover and the mass extinction. Taxonomic turnover where species fauna and flora were replaced by new ones not just individual species, but whole groups of species such as genera, families and orders were changed and replaced. The mass extinction according to estimation happens every 20-30 million years. It's a sudden, world-wide catastrophe which caused the loss of a majority of the species, in seas and lakes and on land alike.

It is called the end-Permian mass extinction, and it is calculated that over 90% of the then living species were lost. The main cause of most mass extinctions was enormous amount of volcanic activity, generating thousands of tonnes of carbon dioxide that heated up the world by as much as 15°C and sulphur

dioxide that created acid rain killing off land plants. The large amounts of volcanic ash emitted covered the skies blocking sunlight from entering stopping the progress of photosynthesis which could have led to lack of oxygen and food resulting in the mass extinction of many species including the dinosaurs. The dead body of these organisms could have been eaten by other species to survive the food shortage. The remaining bones are likely to be weathered away over time. Leaving no trace of the existence of such a species behind.