Fossils: the biological evidence of the history of our planet. Fossils can be used to trace the history of our planet, indicating us to the life on earth over 3500 million years since the first microorganisms. They also enlighten us to the mass extinction of entire species, including the end-Cretaceous roughly 66 million years ago which resulted in the catastrophic eradication of the dinosaurs. However, despite the huge significance of fossils within determining Earth's captivating history, it is estimated that only 1% of all species throughout the history of our planet have been found.

Firstly, in order to acknowledge this staggering figure we must understand the formation of fossils. Fossils are formed when a species is buried under sediment after their death, resulting in decomposition and the organism being preserved in rock. It takes over thousands of years for fossils to form and part of the reason so few species are found is that only certain organisms undergo this process of fossilisation. For example, the probability of a hard bodied organism being found in fossil form thousands of years after its extinction is relatively high due to their bones, skeleton or shell being preserved within a rock instead of decomposed. However, soft bodied organisms rarely fossilise which is part of the reason there is such little trace of every previous organism and bacterium that walked on our planet. As well as this, some fossils are so minuscule that they can only be accessed by a microscope - known as microfossils. It would be nearly impossible to locate every single microfossil, let alone to even know where to access them! Consequently, due to the process of fossil formation and microfossils, finding fossils of particular ancient species is so unlikely!

Furthermore, thousands of years ago Earth would not have had the same geology as it does today. Over the period of centuries, tectonic plates have the ability to alter coastlines and create new landforms. Take the Himalayas for example; ammonites found on one of the tallest mountains on Earth suggest that this colossal giant was previously underwater. Changes to Earth's geology could be a prime reason as to why every fossil is so difficult to unearth, especially since tectonic movement and geological change could hibernate valuable evidence of prior life.

Additionally, oceans cover roughly 70% of our planet. It is believed that 65% of these oceans are unexplored, indicating to us that potential evidence of Earth's history is concealed deep within Neptune and Poseidon's great tomb.

In conclusion - due to the nature of fossilisation, geographical changes and the percentage of Earth unexplored - it is inevitable that only the minority of ancient species will be discovered. Using their knowledge of the history of our planet, scientists would have predicted this to be 1% to be exact. As a young geographer, this figure fascinates me and is part of the reason so many people strive to relieve this ambiguity that clouds over the history of our home.