**Extinction Level Events**

Throughout history of life on Earth there have been periods when an unusually tremendous amount of life forms became extinct. After that new life emerged again creating a different tree of life. Five of these major extinction events have occurred on Earth, scientists, palaeontologists and geologists, record these events through examinations of sedimentary rocks. They look for fossils, mostly the abundant marine ones. In the 80s of the twentieth century, the scientific community finally agreed on what the five major extinction events were.

The last and best recorded of these events was the K-T event, named after the geologic periods it intersects. It happened 65.5 million years ago, during the time of the dinosaurs. It was triggered by an object the size of Mount Everest, moving 150 times the speed of an airliner, the objects trajectory intersected the Earth´s orbit, for only seven minutes, leaving only a small chance of impact, but nonetheless it hit the planet.

The heat generated was enough to set continental forests on fire, which together with the debris created during impact amassed a great number of particles in the atmosphere. The clouded atmosphere made it impossible for the Sun´s light to effectively pass through, halting the process of photosynthesis. After this the climate cooled down, allowing the extinction to happen at an alarmingly rapid rate. Around 75 percent of all species died. Among the survivors were turtles, crocodiles and rodents, our mammal ancestors.

The man who came with the hypothesis involving a meteor or a comet hitting Earth was Walter Alvarez, who noticed a considerable decrease of single-celled organisms on the bottom of the Tertiary layer compared to the bordering Cretaceous layer. Between these two layers of limestone he discovered samples of iridium, a material mostly found on meteors rather than Earth. After this find Alvarez came up with a hypothesis similar to what we know today.

But at that time, his hypothesis baffled many as there was no crater, land or depression that could originate from such an event, from this it was thought that if the point of impact exists it must be flooded underwater. In the 1950s, twenty years before Alvarez´s discovery a group of geologists working for a Mexican oil company found a 120-mile crater off the coast of the Yucatan peninsula. Only in the year 1991 did K-T researchers got together with these geologists and confirmed that the crater was in fact the point of impact. They named it Chixculub, after a village on the peninsular coast.

First, the majority of the scientific community thought that all extinctions happened similar to this, but that was debunked by the fact that in those extinctions, living organisms disappeared gradually. From then on, many theoretical situations were hypothesized to be the causes of the other four major extinctions. These explanations include a sudden influx of volcanic activity, a rapid climatic change, the shifting of positions held by oceans and continents, the multiple impact event and the bottom of the oceans lacking oxygen called anoxic events.

Some of these events are hypothesized to be the parts of a chain reaction, causes and effects, triggering an extinction event. For this, many scientists are convinced that if humans fail to lower the carbon dioxide output, this hypothesis might come true. Many biologists also believe that we are now experiencing a sixth major extinction event right now. They think that it started around 50 000 years ago when humans arrived in Australia and the Americas. **The trend presented in a 2003 World Conservation Union study shows that if it continues half of all species will disappear in the next century.**