

## **Cambrian Fact File**

### ***Anomalocaris***

This ancestor of the arthropods was so large, so unexpected and so bizarre, that for many years after its discovery, the fossils of it that had been found were thought to be from three separate animals!

### **Mix-up!**

This creature was first known from the excellent fossil beds of the Burgess Shale; however, as with many animals, most of the *Anomalocaris* bodies that became fossils were in pieces. When palaeontologists started finding strange circular fossils and odd 'wormy' fossils, they assumed that these represented two or more animals. In fact, it was named *Anomalocaris* (strange crab) after the theory that its feeding claw was actually the segmented body of an arthropod! It was not until a lucky find that it was realised that *Anomalocaris* was so huge and so strange – and that several fossils, thought to be other animals – were actually part of the same creature.

A large, smoothly domed head has a circular mouth beneath it, and two large grasping 'tentacles' that help to move food to the mouth to be chewed. On top of the head are two large prominent eyes, to help it hunt in the gloomy depths. A fringe runs down both sides of the body; this is actually a series of lobes that can be flapped up and down to allow *Anomalocaris* to swim through the water.

### **Giant predator**

The mouthparts of *Anomalocaris* – first thought to be a jellyfish – are made of a ring of strong muscle set with jagged teeth. Trilobites had been found in these deposits that had huge chunks missing from their bodies. On examination, it looked like something with a massive circular mouth had chomped its way through the trilobite – but some of these poor things had managed to escape. But the size of the bites – and the fact that they were circular – puzzled palaeontologists for years until they worked things out. It appears that this strange creature was the top predator of those seas full of early life, and grew to over a metre in length (at a time when its trilobite prey usually only grew to 50cms).

### **Mystery solved**

Although more complete fossils of *Anomalocaris* have been found over the years, and more is known about how it looked, scientists are still puzzled about this creature. It seems to be related to the arthropods, but why have none of them kept the circular mouth? Did it have any legs at all, or did it just move by flapping its side lobes? Did it have any enemies in those early seas?