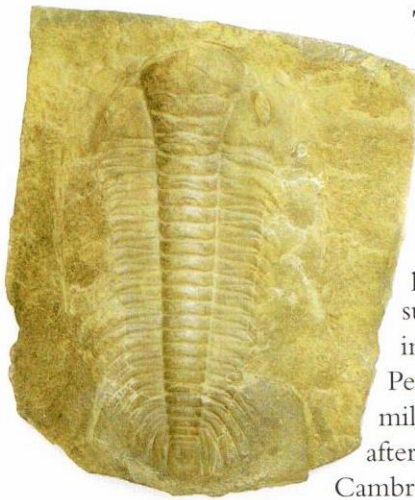


ANIMALS in ARMOUR

Insects, spiders, crabs, scorpions, lobsters, millipedes, barnacles and many other animals belong to a major group of animals called arthropods, a word which means 'jointed foot'.

These animals have existed for millions of years. Some arthropods live in the sea, some live on land and some fly, but very few are found as fossils. All arthropods have jointed legs, a segmented body and an exoskeleton, or outer armour. As the animal grows, it has to shed its exoskeleton every so often and grow another one. Some arthropods – the extinct trilobites, for example – have the mineral calcite in their exoskeletons, making them resistant to decay. These exoskeletons are the parts of arthropods most commonly found fossilised.



Tri-lobed

The name trilobite was given to these creatures because their exoskeletons are divided into three distinct lobes, or parts. The soft parts and the legs on the lower surface of the animal were very seldom preserved. Whole fossil trilobites are surprisingly rare, but they can be found in rocks from the Cambrian to the Permian Period (about 590 to 250 million years ago). They became extinct after that. This one is *Paradoxides* from the Cambrian. One of the biggest of the trilobites, it grew to 50 cm long.



Small is beautiful

Most trilobites were 3-10 cm long. These are examples of *Elrathia*.



Trilobite *Concoryphe*

To see or not to see?

There were more than 10 000 different species of trilobites and all of them lived in the sea. Some crawled along the seabed, others floated or swam through the water. Most species had two eyes and could probably see very well. Lenses are sometimes preserved in fossil trilobites because they were made of the mineral calcite. Some species, however, were eyeless. Most of these lived in darkness in the deep sea, beyond the depth to which natural light penetrates.



Prize possession

Trilobites are prized fossils. This Silurian *Calymene* has been made into a brooch.