

ARTHROPODS

Trilobites

521–251 MYA – EXTINCT

Trilobites are an extinct group of marine invertebrates belonging to the phylum Arthropoda. They had an exoskeleton made of calcium carbonate, which consists of a head shield, between 2 and 100 segments in the thorax, and a tail shield.

Their legs and feather-like gills were beneath the exoskeleton and their mouth was backward facing under the rear of the head shield. Most trilobites had compound eyes containing many small lenses of calcium carbonate, but some were blind and lived in deeper water where sunlight could not penetrate.

Domain	Eukaryota
Kingdom	Animalia
Phylum	Arthropoda
Class	Trilobita

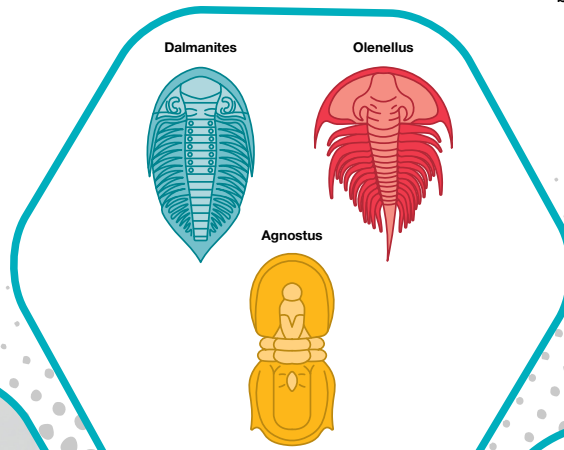
Fossil Record

Trilobites first appear in the fossil record in rocks from the early Cambrian, around 539 million years ago. They diversified dramatically during the Cambrian and dominated marine fauna. They declined from the Silurian onwards and many groups were wiped out by the extinction

event in the late Devonian. In the Carboniferous and Permian, they were a very minor part of the marine fauna with the last trilobites going extinct from the Permian-Triassic extinction event 252 million years ago.

Habitat and Lifestyle

Most trilobites lived on the sea floor in shallow to deep water. Most filtered food particles out of the sediment on the sea floor, or from seawater itself. Some were predators, actively seeking out worms and other invertebrates that burrowed in the sediment.



Three species of Trilobite highlighting the diversity in the species.



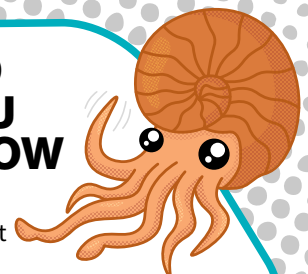
Trilobite fossils from the Cambrian Period (about 500 million years ago). Image from Geoscience Australia.

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DID YOU KNOW



Some trilobites were left-handed! Trilobites moult their exoskeleton like many arthropods and in this process they often used the spines either side of the rear of their head shield to anchor themselves while they bent and twisted out of their exoskeleton. It has been found that about 90% of trilobites used the right spine, while 10% used their left spine. Just like trilobites, about 10% of humans are left-handed.