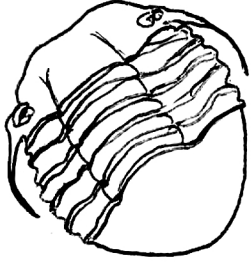


in such a dimly lit environment.

spiny Phacopid Drotops

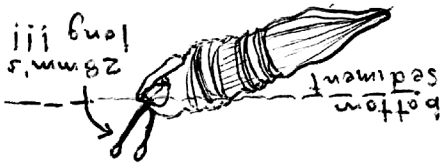


*Illaenus tauricornis*



2.0 cm

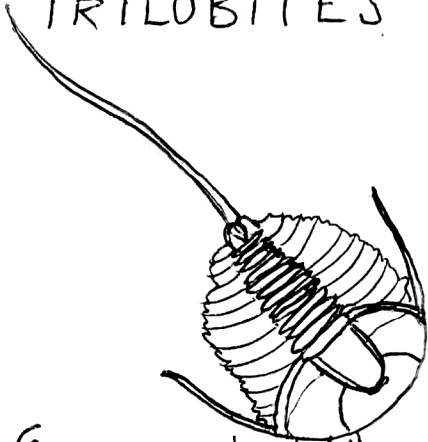
Asaphus kowalewskii's enormous eyestalks enabled it to hide beneath bottom sediment yet remain aware of potential prey passing by. Trilobites may have evolved such sophisticated eye-lenses to maximize optic neuron response



28mm's long!!!

Small Science Collective 2007  
http://smallsciencecollective.blogspot.com/

## THE MANY TYPES OF TRILOBITES



(*Gerospina schachtii*) from Utah

spiders and scorpions. Speculation revolves around whether or not Trilobite eyes were the first advanced eyes, as there is much controversy regarding the origin of photon sensitive cells. Trilobite eyes were composed of inorganic calcite, the only occurrence in the fossil record.

There are nine orders of Arthropod Class Trilobites. The number of species is estimated to range from 10 to 15 thousand. Their fossil record begins in the lower Cambrian. By this time, however, there are already incredibly diverse, causing problems categorizing them in Phylum Arthropoda. Their well-mineralized exoskeletons & highly-advanced visual system were both results of the age-old

evolutionary arms race. Many species of Trilobites perished in the extinction of the late Cambrian, and again at the end of the Ordovician periods. The Silurian and Devonian produced many new exotic forms some of them survived into the Carboniferous, though all were extinct by the end of the Permian. The closest living relative of the Trilobite could be the horseshoe crab, a crustacean, or among the

evolutionary arms race.

### A FEW EXAMPLES

*Dicranurus monstruosus*, Moroccan Trilobite.

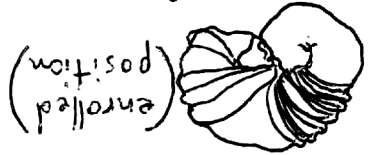
(Lichida Species)



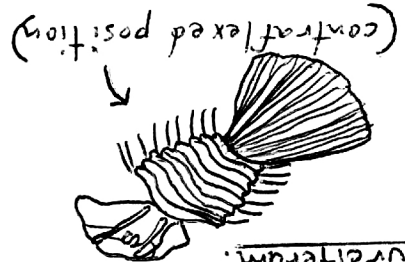
(2.2 inches long)

Features include dramatic cephalon and eighteen spines. The spines served as visual warning to predators such as crabs and fish.

Another defensive adaptation, the ability to roll into a ball allows the Trilobite to cover its soft ventral underside. Over time the exoskeletons became stronger



(enrolled position)



(contracted position)

*Scabriscutellum furiferum*