

Domain	Eukaryota
Kingdom	Acritarch

# Acritarchs

3200 MYA – PRESENT

Acritarchs are a collection of many types of small (0.01 mm – 0.25 mm) organic-walled, acid-insoluble microfossils of uncertain origin. Most of them probably represent marine algae in its dormant stage, surviving in unfavourable environmental

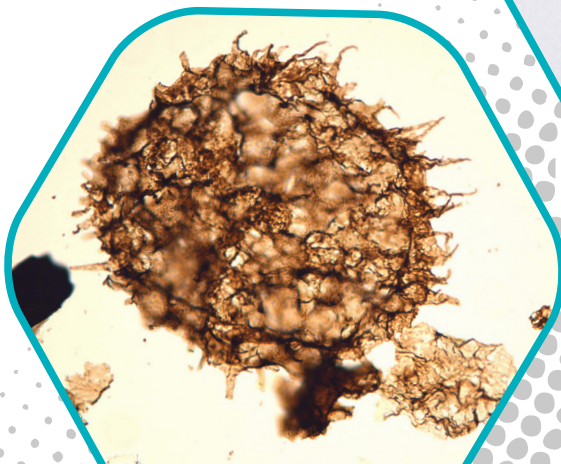
conditions. Once the actual source of an acritarch becomes known, the organism tends to be reclassified and included with a different group of organisms.

## Fossil Record

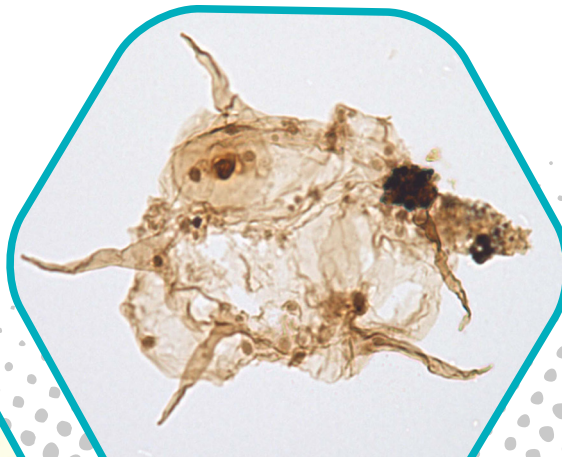
Acritarchs are first seen in the fossil record from the Mesoarchean, about 3.2 billion years ago, and are most abundant in the Proterozoic. Acritarchs suffered a major extinction during the Neoproterozoic glaciations about 630 million years ago, but rapidly re-diversified. Acritarchs are useful tools to determine the age of the rocks they are preserved in.

## Habitat and Lifestyle

Acritarchs live mostly in shallow marine environments.



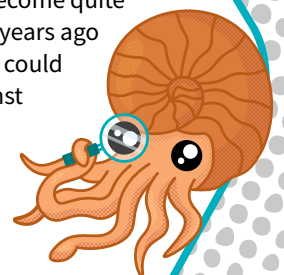
Acritarch *Gyalosphaeridium multispinosum*, Ediacaran (about 600 million years old). Image from Kath Grey, Geological Survey of Western Australia.



Acritarch *Tanarium paucispinosum*, Ediacaran (about 600 million years old). Image from Kath Grey, Geological Survey of Western Australia.

## DID YOU KNOW

Acritarchs started to become quite spiny about one billion years ago and it is thought that this could have been a defence against early herbivores.



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