

ECHINODERMS

# Sea stars

450 MYA – PRESENT

Sea stars, or starfish, are related to sea urchins, crinoids, and sea cucumbers and also belong in the phylum Echinodermata. Most sea stars have five arms, or rays, but some species have up to 50, and some species can even regrow severed rays.

The bodies of sea stars are covered in small calcium carbonate plates, spines, or granules called ossicles. Their mouth is located on the underside in the centre of the body and each of the arms has numerous hydraulic tube-feet which sea stars use for movement and feeding.

Domain	Eukaryota
Kingdom	Animalia
Phylum	Echinodermata
Class	Asteroidea

## Fossil Record

Sea stars first appear in the fossil record in rocks from the Ordovician, around 480 million years ago, but are actually rarely found in great numbers in the fossil record.

## Habitat and Lifestyle

Sea stars live in all the world's oceans from the tropics to the poles and extend from intertidal zones down to 6000 m in depth. Most sea stars are predators, and will eat anything too slow to evade their attack.

Some sea stars eat organic material in sediments, while others scrape algae off rocks. Some, such as the crown-of-thorns starfish, predate on coral polyps, sometimes leaving devastating impacts on ecosystems.



Asteroid, Permian (about 270 million years old), New South Wales.  
Image from Jim Frazier.



Close-up of a sea star showing tube-feet used for movement and feeding.  
Image from umarigar, pixabay.

## DID YOU KNOW

Many sea stars have a tiny simple eyespot on the end of each of their arms. These do not form an image in the way our eyes do, but are sensitive to light and dark and therefore can detect nearby movement and sunlight intensity.



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