

MEET EURYPTERIDA

- one of the largest and fiercest predators of the Paleozoic Era.
- Commonly called sea scorpions due to their long tails with a spiky appendage at the tip.
- Closely related to scorpions and other arachnids.



<http://www.fossilmuseum.net/fossils/Chelicera/Eurypterus-remipes/Eurypterus.htm>

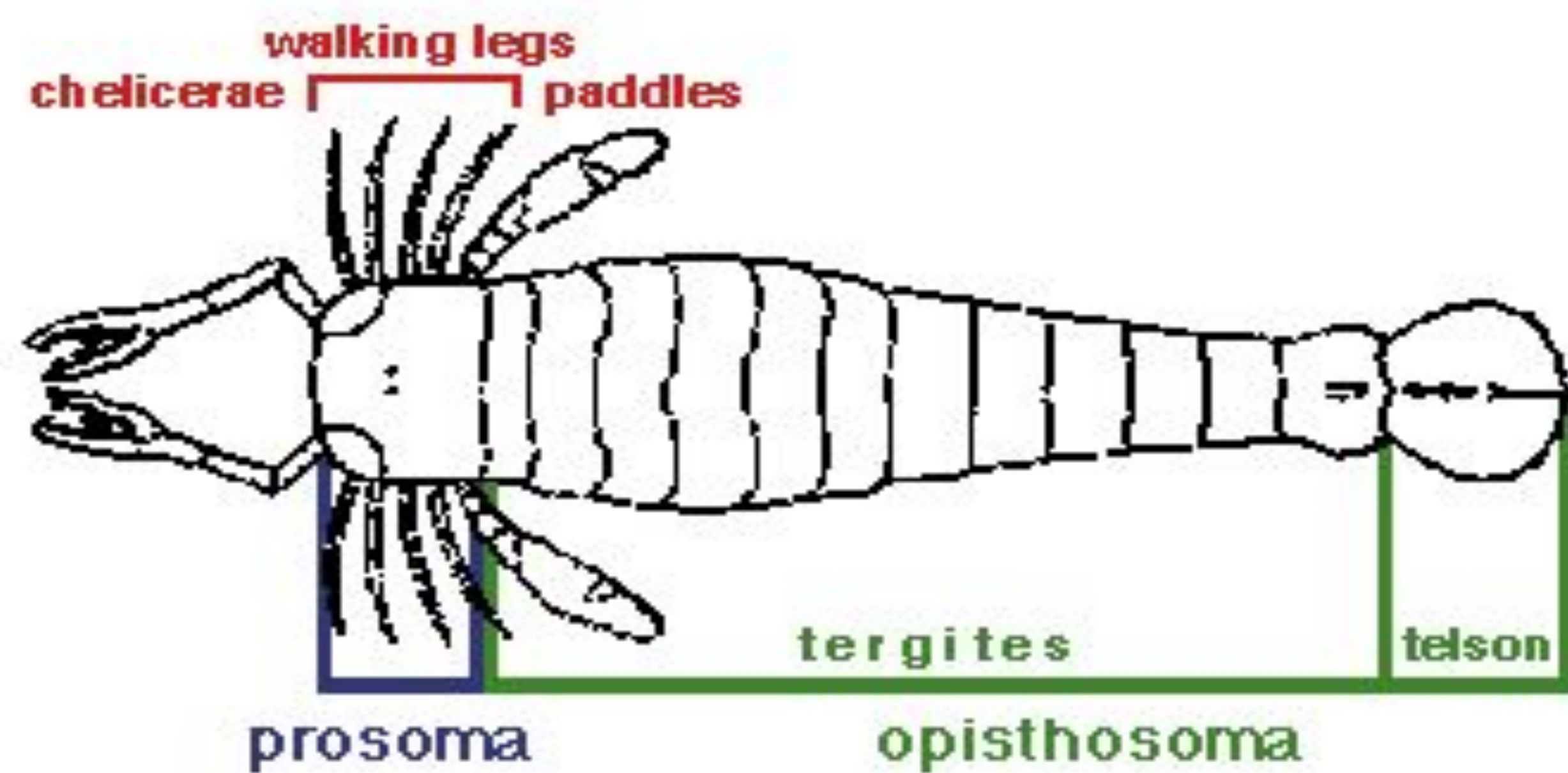
SPECIES AND EXAMPLES OF DIVERSITY

- Eurypterids arose during the middle Ordovician period
- first known species: Megalograptidae and Brachyopterus.
- Highest amount of diversity in the Silurian, containing over half of the total species diversity
- During late Silurian, larger and more specialized species called Pterygotid Eurypterids appeared, with some as large as 2 meters.



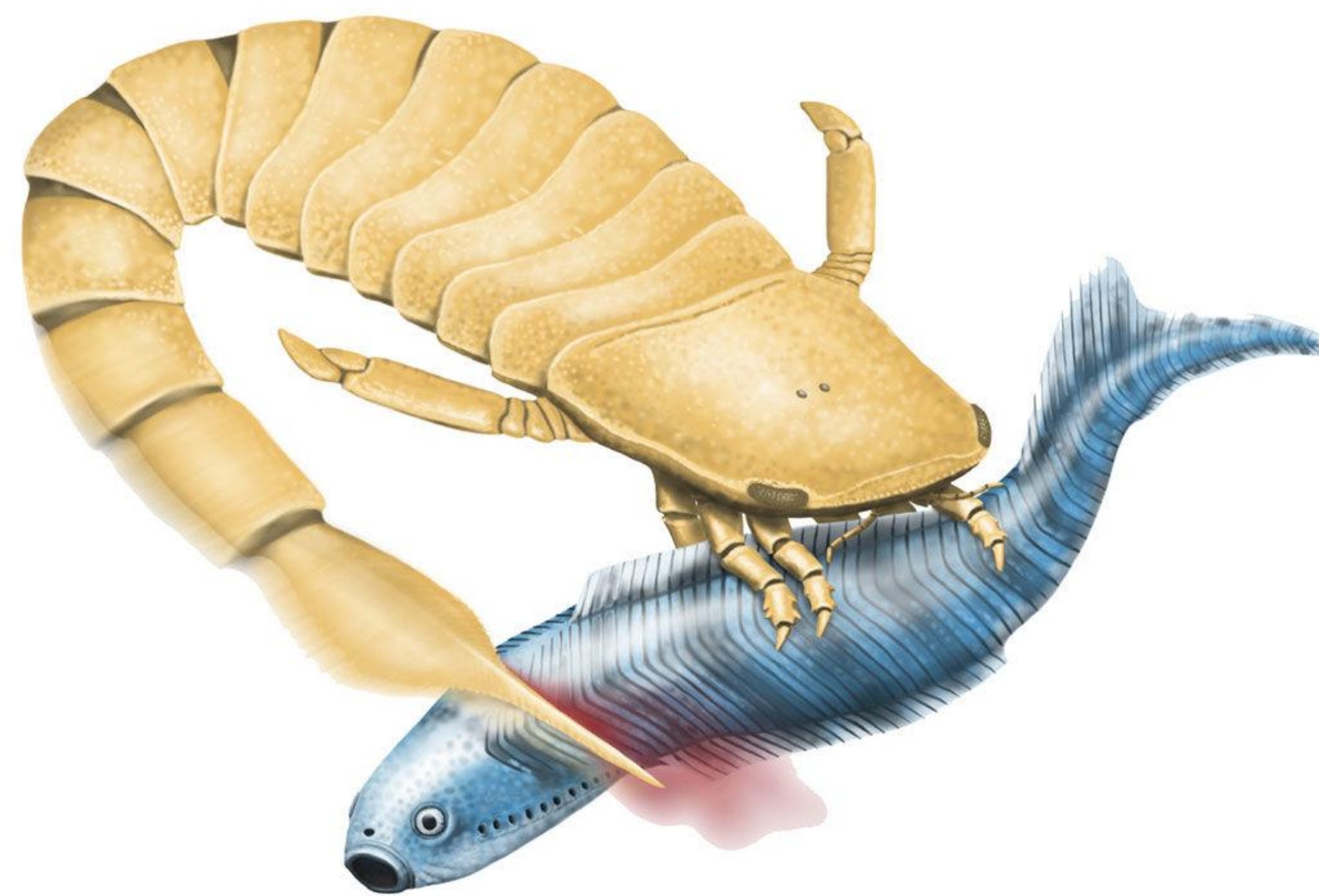
https://www.researchgate.net/figure/Family-level-evolutionary-tree-of-the-Eurypterida-Bars-represent-known-temporal-ranges_fig1_38010972

Eurypterida (Giant Sea Scorpions)



PHYSICAL DESCRIPTION

- Eurypterida varied in size
 - the largest, *Jaekelopterus*, at 3.5 meters (8.2 ft)
 - the smallest, *Alkenopterus* and *Eocarcinosoma*, at 3 centimeters (1.2 in)
 - Most species grew up to 100 centimeters (3.3 ft.)
- Dual respiratory system
- Wide swimming appendages, large pincers.
- Covered in a cuticle composed of proteins and chitin
- Segmented bodies and jointed limbs
- Two segments: frontal prosoma and posterior opisthosoma



<https://www.sciencemag.org/news/2017/04/killer-tail-spine-likely-helped-ancient-sea-scorpion-subdue-its-prey>

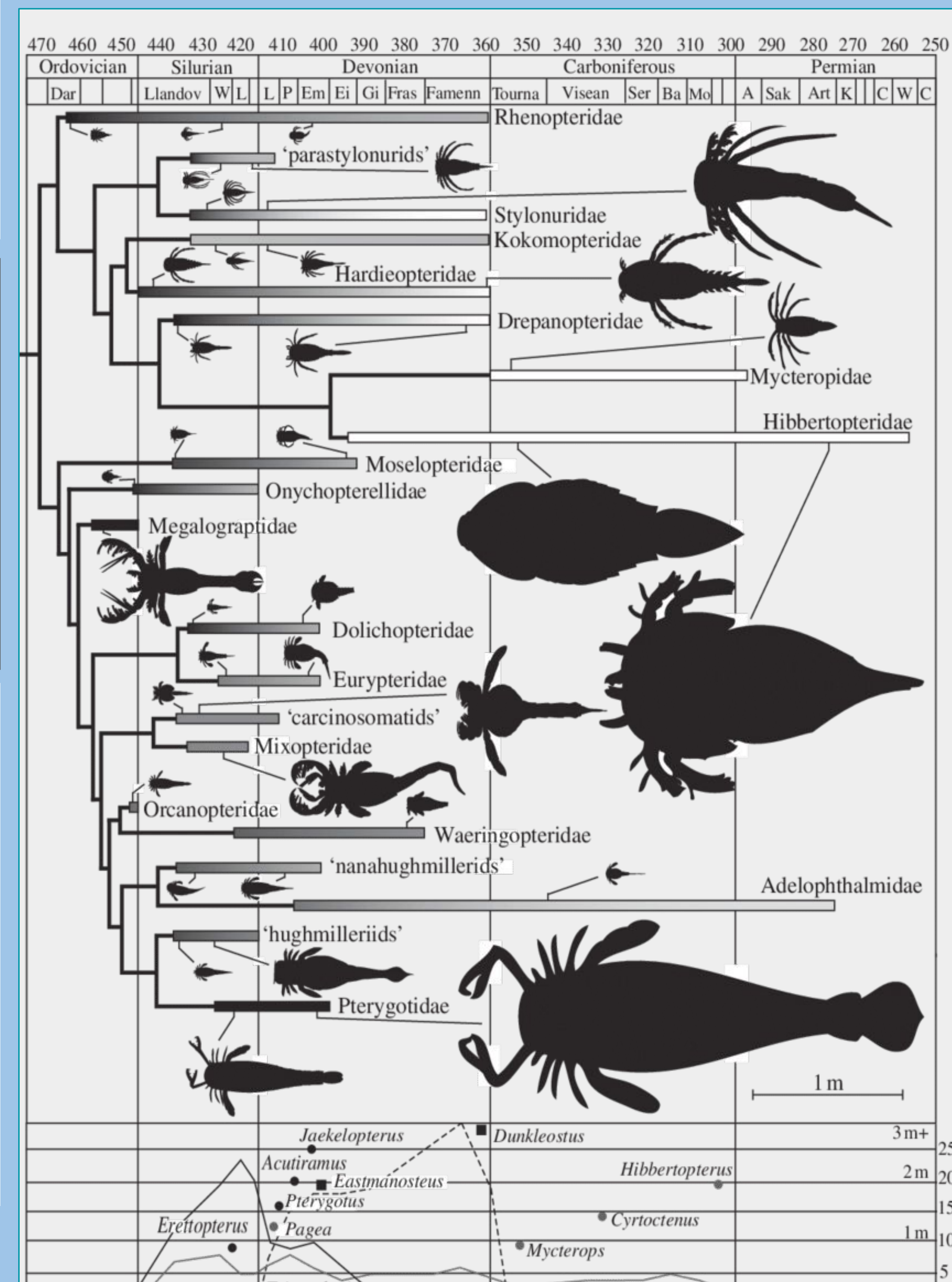
DIET

- mainly preyed on Trilobites and Agnatha
- quick moving, plier-like claws to catch slow-moving trilobites.
- Agnatha lacked lateral fins, making them relatively slow compared to Eurypterids.

EXTINCTION

- The Eurypterida are a major Paleozoic arthropod group.
- Middle Ordovician- Late Permian (467-254mya).
- The Devonian mass extinction caused the clade to shift from being very diverse to being stagnant.
- There were no spikes in extinction rates, but instead a major decrease in speciation.
- Shifted from saltwater to freshwater

<https://www.sciencemag.org/news/2017/04/killer-tail-spine-likely-helped-ancient-sea-scorpion-subdue-its-prey>



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<https://ucmp.berkeley.edu/arthropoda/chelicera/eurypteridmm.html>