

Mosura fentoni

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Mosura fentoni Latest News

Scientists recently identified a new extinct species, *Mosura fentoni*, an early marine predator from around 506 million years ago during the Cambrian period.

About Mosura fentoni

- ***Mosura fentoni*** is a newly discovered **Cambrian marine organism** found in the **Burgess Shale**, a globally significant fossil site in **British Columbia, Canada**.
- It belongs to the group **Radiodonta**, which are **extinct stem-group arthropods**, distant relatives of **modern insects, spiders, and crustaceans**.
- Despite being a **small-sized species** (ranging from **1.5 to 6 cm**), ***M. fentoni*** displays **highly specialised anatomical adaptations**.

Unique Morphological Features

- The body of ***Mosura fentoni*** is unusually **elongated**, with a division into **three distinct zones** comprising a total of **26 segments**:
 - A **short neck** region that supports the **head**,
 - A **mesotrunk** consisting of **six paddle-shaped flaps** that function as **propulsive organs for swimming**,
 - A **posterotrunk** containing up to **16 segments** dominated by **rows of fine gills**.
- The **posterotrunk** is proposed to be a **specialised breathing tagma**, drawing parallels to the **oxygen-collecting tails of modern horseshoe crabs**, suggesting a **highly evolved respiratory mechanism** in this ancient organism.

Geological and Paleontological Context

- The fossil belongs to the **Cambrian period**, which began around **540 million years ago**, following the **Precambrian-Cambrian boundary (600-540 Ma)**.
- This period witnessed the **Cambrian Explosion**, also known as the **Cambrian Big Bang**, marked by the **sudden emergence of complex animal life** with hard body parts.
- The transition from **soft-bodied Ediacaran fauna** to **skeleton-bearing Cambrian organisms** represents a **major biotic shift** in Earth's history.
- Changes in the **carbon (C) and strontium (Sr) isotopic composition** of rocks during this period aid in the **stratigraphic correlation of Proterozoic-Cambrian boundaries**.

Mosura fentoni FAQs

Q1: What is *Mosura fentoni*?

Ans: *Mosura fentoni* is a newly discovered extinct marine species from the Cambrian period, dating back around 506 million years, known to be an early marine predator.

Q2: Where was *Mosura fentoni* discovered ?

Ans: It was found in the Burgess Shale of British Columbia, Canada.

Q3: Which group does *Mosura fentoni* belong to?

Ans: It belongs to the Radiodonta, a group of extinct stem-group arthropods, which are distant evolutionary relatives of modern insects, crustaceans, and arachnids.

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