

505-Million Year Old Jellyfish Fossils

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Why in News?

Recently, researchers have unveiled a **collection of jellyfish fossils from the Cambrian period**, providing a unique glimpse into their distant past.

■ These preserved fossils, found in the **Burgess Shale**- a renowned fossil-rich site in the **Canadian Rockies**, offer an improbable pathway to preservation.

What are the Major Findings of the Research?

- Special Features of the Fossils:
 - The newly discovered jellyfish fossils retained remarkable features, such as over 90 fingerlike tentacles protruding from their bell-shaped bodies.
 - Some specimens even contained stomach contents and gonads, providing invaluable insights into their anatomy and behavior.
 - These things help scientists learn about how the jellyfish looked and acted.
- Link with Old Fossils from a Quarry:
 - In the 1990s, scientists dug up over 170 jellyfish fossils in a place called Raymond Quarry in British Columbia. These fossils were kept for a long time.
 - Researchers re-examined the specimens from the excavation and identified that the fossils actually belonged to a **previously unknown species**.
 - This newly discovered species was named **Burgessomedusa phasmiformis**. The species falls under the **medusozoans category**.

What are Jellyfish?

- About:
 - Jellyfish are members of the phylum Cnidaria, a group of animals that includes <u>corals</u>, sea anemones, hydroids, and siphonophores.
 - Cnidarians are characterized by having radial symmetry, a central mouth surrounded by tentacles, and specialized stinging cells called cnidocytes that can inject venom into their prey or predators.
 - Jellyfish tend to just **follow the** <u>currents of the ocean</u>, they can be found around the world in every type of ocean water.
 - They are considered to be one of the earliest branches of the animal tree of life.
- Characteristics:
 - Despite their name, jellyfish do not have much characteristics of a fish, they are invertebrates, or animals with no backbones.
 - Jellyfish are also among the simplest animals in terms of body organization and nervous system, **lacking a brain, a heart, or a skeleton.**
 - However, some jellyfish have evolved remarkable adaptations, such as eyes, bioluminescence, and complex behaviors.
- Prey:

- They dine on **fish**, **shrimp**, **crabs and tiny plants**. They have tiny stinging cells in their tentacles to **stun or paralyze their prey** before they eat them.
- Challenge of Jellyfish Fossilization:
 - Jellyfish, composed of 95% water, pose a considerable challenge when it comes to fossilization. Their delicate structure makes them prone to rapid deterioration, leaving behind minimal traces in the fossil record.

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