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Spicomellus afer: The Oldest Known Armoured Ankylosaur

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Prelim - Geography, Environment

Discovery in Morocco

- Fossils of *Spicomellus afer*, an ankylosaur dinosaur, were discovered in the Atlas Mountains near Boulemane, Morocco. Dating back **165 million years** to the Jurassic Period, these fossils revealed one of the most extreme armoured dinosaurs known.

Unique Features

- Unlike many early dinosaurs with simpler body plans, *Spicomellus* was lavishly armoured with spikes and fused tail vertebrae, suggesting it may have wielded a **tail weapon** for defense, even though the weapon itself was not preserved in the fossils.

Significance in Evolution

- *Spicomellus* is the **earliest-known ankylosaur**, part of a group of plant-eating, tank-like dinosaurs that walked on four legs. Ankylosaurs were closely related to stegosaurs but proved more successful, surviving until the mass extinction 66 million years ago.

Legacy and Comparison

- While smaller than the later **Ankylosaurus** of North America, *Spicomellus* highlights that ankylosaurs evolved complex armour and defenses much earlier than previously thought, reshaping our understanding of dinosaur evolution.

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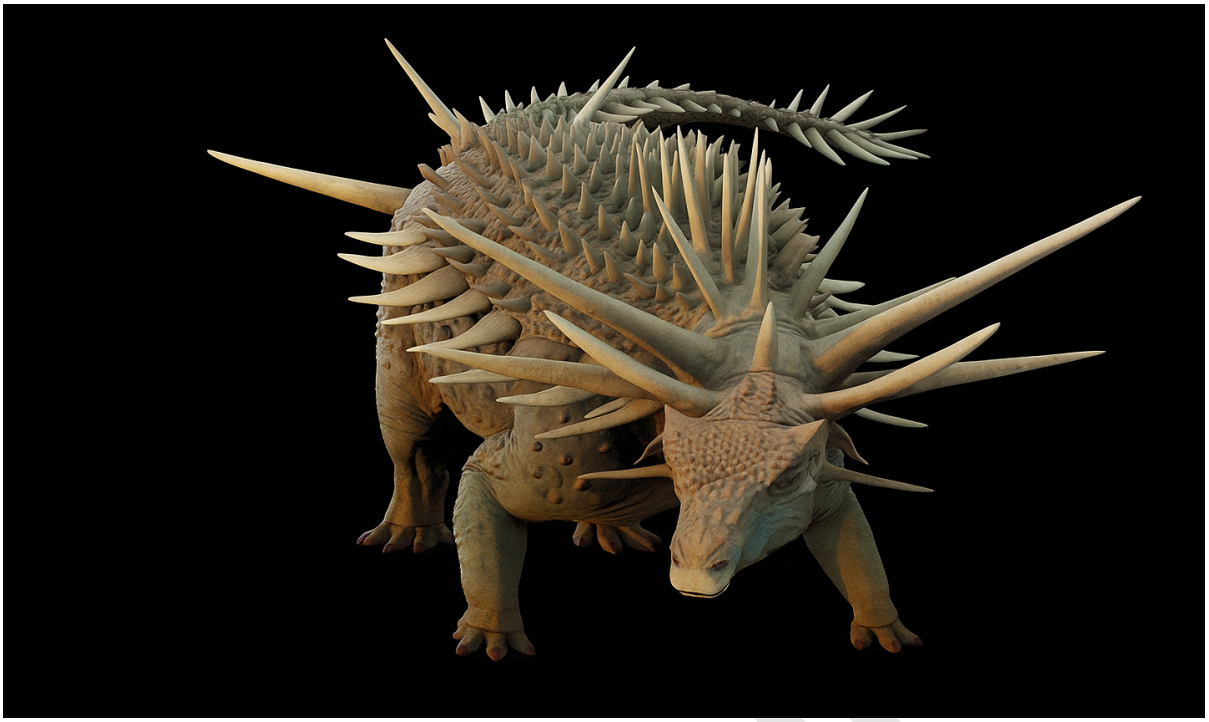

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