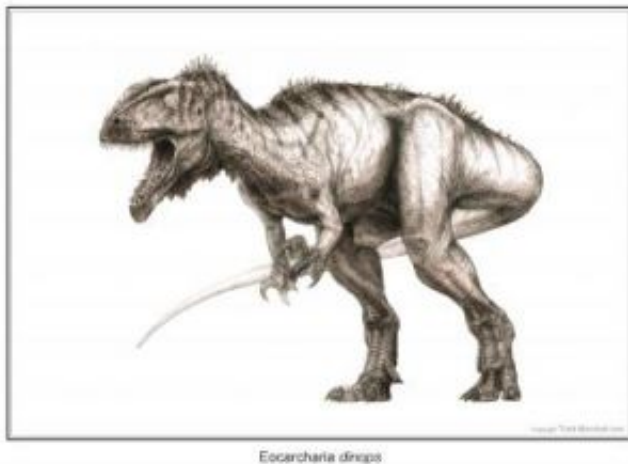


New meat-eating dinosaur duo from Sahara ate like hyenas, sharks

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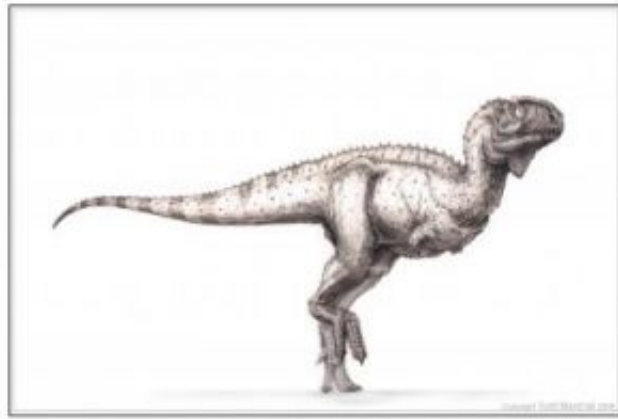


Full-body portrait of Eocarcharia. Credit: Copyright Todd Marshall, courtesy of Project Exploration

Two new 110 million-year-old dinosaurs unearthed in the Sahara Desert highlight the unusual meat-eaters that prowled southern continents during the Cretaceous Period. Named Kryptops and Eocarcharia in a paper appearing this month in the scientific journal *Acta Palaeontologica Polonica*, the fossils were discovered in 2000 on an expedition led by University of Chicago paleontologist Paul Sereno.

Sereno and co-author paleontologist Stephen Brusatte of the University of Bristol say the new fossils provide a glimpse of an earlier stage in the

evolution of the bizarre meat-eaters of Gondwana, the southern landmass.



Kryptops palaios

Full-body portrait of Kryptops. Credit: Copyright Todd Marshall, courtesy of Project Exploration

“T-rex has become such a fixture of Cretaceous lore, most people don’t realize that no tyrannosaur ever set foot on a southern continent,” said Sereno. Instead, particularly distinctive meat-eaters arose, some of which bore no resemblance to the “tyrant king,” beyond their appetites for fresh meat.

Short-snouted *Kryptops palaios*, or “old hidden face,” was so named for the horny covering that appears to have covered nearly all of its face. “A fast, two-legged hyena gnawing and pulling apart a carcass,” remarked even Brusatte, “is how we might best imagine *Kryptops*’ dining habits.” Like later members of its group (called abelisaurids) in South America and India, *Kryptops* had short, armored jaws with small teeth that would have been better at gobbling guts and gnawing on carcasses than snapping at live prey. About 25 feet in length, *Kryptops* was a voracious

meat-eater.

A similar-sized contemporary, *Eocarcharia dinops*, or “fierce-eyed dawn shark,” was so named for its blade-shaped teeth and prominent bony eyebrow. Unlike *Kryptops*, its teeth were designed for disabling live prey and severing body parts. *Eocarcharia* and kin (called carcharodontosaurids) gave rise to the largest predators on southern continents, matching or exceeding *Tyrannosaurus* in size. *Eocarcharia*’s brow was swollen into a massive band of bone, giving it a menacing glare.

“Brow-beating may not be far from the truth,” remarked Sereno. He and Brusatte suggest in the paper that the robust bony brow in *Eocarcharia* and kin may have been used as a battering ram against rivals for mating rights.

The fossil area, in present-day Niger, was home to a panoply of bizarre species. The hyena-like *Kryptops*, the shark-toothed *Eocarcharia* and the fish-eating, sail-backed *Suchomimus* (“crocodile mimic”) constitute a meat-eating trio that characterizes the Cretaceous Period in Africa and possibly other southern landmasses.

They preyed upon the ground-grubbing, long-necked plant-eater *Nigersaurus* and lived alongside the enormous extinct crocodilian nicknamed “SuperCroc” (*Sarcosuchus*). Then, the African continent was part of Gondwana and just beginning to free itself of its land connection to South America.

Source: University of Chicago

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