

Living Fossil Plants That Once Were Dinosaur Food*

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Many people tend to visualize dinosaurs as the cinematic super stars—the meat-eaters such as Tyrannosaurus Rex and Velociraptor. The only time plant-eaters come into the picture is when they are being chased down and chomped on.

Up until the late Jurassic period, the prehistoric plant world was a strange and somber place. There were no colorful flowers and yet the forest consisted mainly of shades of green and brown. Large tree ferns, club mosses and horsetails dominated the canopy. The lower-lying plants would have been made up of ferns, horsetails and mosses.

How do we know what plants the herbivores ate? We really don't. There have been a few rare fossil finds that had plant material preserved in the animal's stomach cavity, but for the most part we try to match an animal's dentition or other physical characteristics with the plants of the day. This can be fairly accurate with dinos like the duck bills with hundreds of flat, grinding teeth for munching on tough horsetails, or the peg-like teeth of the giant Sauropods suitable for stripping the leaves from tall coniferous trees. Anyone familiar with today's surviving cycads knows how tough and defensive these plants are. The musculature of the big Ceratopsians (like Triceratops) shows that these creatures could munch 2x4's like toothpicks.

The flow of prehistoric plant evolution is almost entirely based on conjecture and speculation, but we do know from the fossil record certain plants were found in geologic strata contemporary with specific dinosaurs. If we took the types of fossil plants co-existing with the dinosaurs, we go from the bizarre and unusual to more recent old friends.

We can begin with tree fern, ginkgos and cycads, then progress to cone-bearing trees like redwood, dawn redwood and pines. Finally, the flowering plants would appear about 140 million years ago with representatives such as magnolias, walnuts, willows and other familiar faces.

Once the flowering plants showed up, they quickly spread and took over the landscape. Their proliferation was so rapid that one of the early theories of dinosaur extinction was that with the relatively sudden onset of a new flora, the digestive system of the herbivore dinosaurs couldn't adapt.

Dinosaurs Will Roam San Antonio Botanical Garden This Fall



Giant dinosaurs will arrive at the Botanical Garden Labor Day weekend for a 3-month Exhibit. The display of Texas dinosaurs will Also show the plants they fed on and what Science considers today to be "living fossil plants". Three of them will be 30-feet long: Edmontosaurus, Krittosaurus and the Daspletosaurus. The dinosaurs are currently under construction. The "Dinosaurus-Tex"

exhibit has been made possible with
corporate sponsorship from HEB.

