

THE FOSSIL RECORD

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Over the Wire:

SEARCHING FOR EVIDENCE

Seductive Methods of Cycads

Pure Biochemistry

The cycad, a common plant during the age of the dinosaurs, has always been thought to be wind pollinated. Recent studies have shown that a volatile chemical and an unsuspecting insect actually drive pollination.

The research demonstrates that modern cycad cones have the ability to regulate a chemical that first attracts and then repels the pollinating insect, the thrip. The stinky chemical (beta-myrcene) is present in both the male and female cycad cones. The male cone first produces pollen on which the thrip thrives. The cone then quickly switches the beta-myrcene from low emission to profusion, driving the pollen-laden insect to the female cone, which is attracting the insect by emitting the chemical at low levels. At that time, the insect fertilizes the female cone with the pollen as the female cone releases a thrip-attractive nectar-like droplet at “just-the-right-time”.

The next time you visit your favorite nursery, look for the cycad, and watch out for the beta-myrcene. It is reported to smell like manure – but only when the male is producing pollen.

Field Trip:

THE HISTORY OF THE NORTHWEST

Fossil Crocodile Excavation

Natural History of Mesozoic Oregon

Date: October 20 & 21.

Cost: Free

Call: (503) 358-9030 for arrangements.

Additional bones to a fossil marine crocodile have just been unearthed in eastern Oregon. Previously, we had collected the skull and several ribs of the

large crocodile on the Weberg Ranch southeast of the town of Paulina. More recently, we were pleased to find vertebrae, leg bones, and ribs continuing into the strata.

You are welcome to join us as we excavate before winter starts in earnest. Role up your sleeves and prepare for hard work, or simply watch or explore nearby hillsides for ammonites and other fossils.

We will be tent camping near the site on this trip and will be prepared for any kind of weather. If you prefer to stay in a motel, the drive from Prineville is about an hour and a half.

In the Laboratory & the Field:

MUSEUM NEWS

Museum Scientists

The paleontology lab at OMSI was closed during the summer during the recent *Body World* traveling exhibit. Now open again, the preparation of our dinosaur and other fossils is available for viewing.

A most remarkable specimen we are preparing is that of an ancient 30 million year old baleen whale from the Strait of Juan de Fuca in Washington. Although modern whales have the nostril (blowhole) near the back of the head, this exceptionally primitive animal has the blowhole farther forward toward the snout. We are excited as the preparation is exposing more of this new animal.

We are also working with paleontologists from Seattle, Berkeley and New Zealand on an ancient methane seep deposit and associated peculiar fossil clams located in the Oregon Coast Range. This 35 million year old limestone deposit has a modern counterpart near the Galapagos Islands where methane and other gasses are making their way through the Earth's crust to the sea floor. The gasses provide nutrients for a strange cluster of animals that thrive under inimical conditions. We are now analyzing rock samples from the Oregon locality for their ancient chemical signatures to see how they compare with modern seeps.