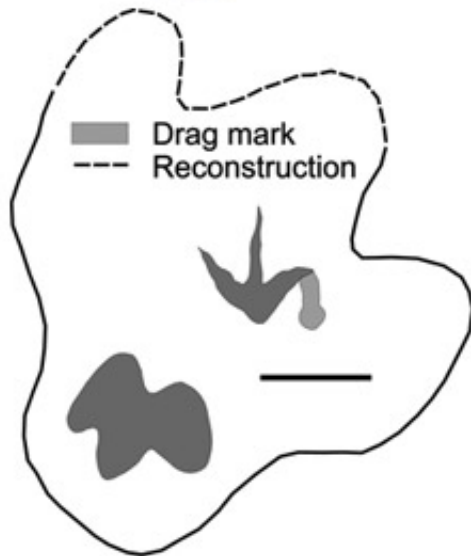


Three dinosaur footprints discovered on one boulder

April 11 2011



The boulder with the three dinosaur prints

(PhysOrg.com) -- Three different dinosaur footprints have been found on a 50 kilo boulder from an Isle of Wight beach, providing evidence of life on a riverbank 130 million years ago.

The rock contains the print of an adult Iguanodon, a large plant-eating dinosaur, twice as heavy as an elephant, a tiny bird-like carnivorous dinosaur known as a theropod and a 'baby' Iguanodon-like dinosaur. The boulder was rescued from the waves by University of Portsmouth palaeontologist Dr. Steve Sweetman.

The Isle of Wight is internationally renowned for being one of the richest sources of dinosaur remains in Europe because its habitat provided ideal conditions for dinosaurs to roam.

Dr. Sweetman said, "As a vertebrate palaeontologist I spend most of my time looking at bones – the detritus of death – so to come across a fossil that provides direct evidence of life is fascinating and rather refreshing.

"What we have found here is a remarkable fossil that provides tantalizing evidence of the existence of animals for which we either have no bones or the merest scraps of bones.

"The rock shows us that a large Iguanodon was wandering about in a muddy environment leaving deep footprints as it walked. That it was part of a group or a herd is without doubt because there are many other similar footprints found on rocks scattered on the beach.

"However, what this truly remarkable specimen shows is that a tiny theropod has stepped into the Iguanodon print, first dragging a toe in the mud before finally putting its foot down, and then at almost the same time a little Iguanodon-like animal has stepped into the same hole!

"This tells us that during the Early Cretaceous, Brook Bay where the

boulder was discovered, was a truly busy place teeming with life and in the shadow of the large dinosaurs tiny ones, of all shapes and sizes, were also thriving.”

When Dr. Sweetman first saw the rock he left the beach worried it would be destroyed by storms that regularly batter this part of the coast. He decided it was far too interesting to leave and having sought permission from the National Trust, which owns the cliffs and foreshore, went back to retrieve it.

Initially he had only noticed two footprints but when he got home and cleaned the boulder he discovered a third print. “I couldn’t quite believe it when I realised there was another print - there are hundreds of footprints on the beach at Brook Bay but it’s extraordinary to find three in one, and the little [theropod](#) print is unique.”

Impressions like footprints can become fossils if conditions are just right.

“In this case the [dinosaurs](#) were trampling about in thick gooey mud on a floodplain close to a large river leaving their footprints behind. The river, which had a sandy bed, then burst its banks rapidly filling the prints with sand.” he said.

The sand grains became cemented together by minerals so the imprints set solid before they could be erased by water or wind. Sediments continued to be deposited above the footprints, burying them deep in the ground.

Today the mud and the sand have been lifted to the surface by immense geological forces where they are now being eroded by the sea. The mud containing the [footprints](#) is still soft and is being washed away faster than the sandstone that has preserved them as casts. As the mud is removed

the casts are exposed on the beach for all to see.

Dr. Sweetman is to donate the specimen to the Dinosaur Isle Museum on the Isle of Wight where it will go on public display.

Provided by University of Portsmouth

Citation: Three dinosaur footprints discovered on one boulder (2011, April 11) retrieved 24 April 2024 from <https://phys.org/news/2011-04-dinosaur-footprints-boulder.html>

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