

## Sea Monsters, a Prehistoric Adventure IMAX 3-D movie

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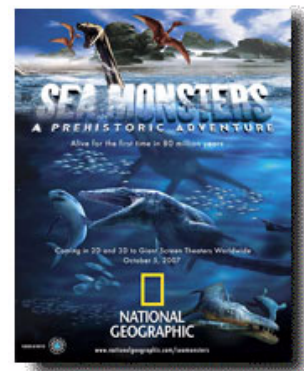
Produced by National Geographic, and part funded by the National Science Foundation  
Running time approximately 45 minutes  
Price dependent upon the cinema

Our story begins on a wind swept and rainy night in Kansas with a young girl chasing after her dog, only to chance upon some bones eroding out of a hillside. When palaeontologists arrive they quickly recognise the fossil remains as those of a *Dolychorhynchops*—a dolphin-sized, short-necked, long-snouted plesiosaur. This chance discovery takes us back in time to the long lost world of the Late Cretaceous 82 million years ago, when the central part of the United States was covered by a vast inland seaway. Here we see a bright Bahamas-like scene with vividly coloured pterosaurs flying gracefully overhead, and in the waters beneath are monsters indeed—those strange looking Cretaceous marine reptiles that nightmares are made of.

The story revolves around a mother *Dolychorhynchops* and her two offspring, which are affectionately referred to as ‘Dollys.’ As the story of their lives unfolds, we are taken from the shallows in which they are born, to the menacing depths of the North American Western Interior Sea. The waters are inhabited by a bewildering array of fantastically animated creatures, and we are introduced to a cast of thousands along the way. Early on we meet the toothed, flightless bird *Hesperornis* chasing fish, and a stunning scene of the plesiosaur *Styxosaurus*, which makes fabulous use of 3-D imagery, showing us just how long the neck was on these bizarre animals. The unfortunate herring-like fish *Enchodus* are the Dollys’ favourite food, and seeing marine reptiles and birds hunting amongst a

writhing, shining mass of fish is a fantastic way of integrating modern fish behaviour into the story, and really brings the fossils to life. Later, we look the giant squid *Tusoteuthis* straight in the eye as it swims by, catch a glimpse of a passing turtle, and are introduced to some of the top predators including sharks which circle menacingly, and the gigantic and ever hungry mosasaur, *Tylosaurus*. The main characters are supported by thousands of fish, ammonites, crinoids, and jellyfish, forming an entire ecosystem within which the story unfolds.

Palaeontological finds are skilfully interwoven into the narrative, which takes us on a broad sweep around the Cretaceous globe, integrating specimens and collectors into an enchanting story. We travel from the vast expanses of Australia, to the quarries of North Africa, and we see specimens unearthed in Europe, and across the United States of America. The fossils are carefully matched to the scenes in the story without interrupting the flow of the narrative, thereby indicating the fossil evidence for the story told. Fieldwork, collectors note books, and historical photographs are all utilised to give reality to the scenes. At one point George Sternberg excavates the now famous ‘fish-within-a-fish’



and we are treated to a wonderful view of the 3.9 metre long *Xiphactinus* biting off more than it could chew as it swallowed a whole 2 m *Gallicus* head first. However, not all of the scenes worked. The attempts to show the enormity of geological time, illustrated by a 'fast forward' of rising and falling sea levels, mountain formation and erosion, changing vegetation, and the wax and wane of ice sheets, were difficult to interpret. And to the trained eye the fossils looked rather too much like casts, but maybe that's because we've seen so many of them holding pride of place in museums, so this may be less of a problem for the majority of the audience.

The 3-D animation is spectacular. The play of light through the water onto the animals' backs is truly stunning, and the plesiosaurs' swimming is entirely believable, although the tentacles of the cephalopods looked somewhat stiff, when compared to the majestic fluidity seen in their living relatives. However, there are many memorable scenes, such as when the young female Dolly 'pecks' at a large ammonite, only to be squired in the face by a jet of ink. And it's wonderful to see the menacing spectre of a *Tylosaurus* slowly hunting its prey, shoals of jelly fish, floating colonies of crinoids, and spawning *Bacculites* ammonites.

For countless generations, sea monsters have captured the imagination of seafarers and landlubbers alike. The curiosity of the public was first awakened by the discovery of extinct marine reptiles in the 1820s, making sea dragons instrumental in the development of the science of palaeontology, long before dinosaurs entered the public psyche. And today it's no different; National Geographic, part funded by the National Science Foundation, has brought us a lavish and beautifully animated look at the Late Cretaceous marine reptiles and their world. They have pulled together some of the many creatures that inhabited those Cretaceous seas into a memorable epic. Overall, *Sea Monsters* is an enthralling story of a world long gone, now only available to us through the tiny scraps of evidence left behind as the fossil record.

And what's our conclusion? Well, go and see *Sea Monsters* for yourself. Relish in the fantastic 3-D visualisation of these magnificent, extinct monsters of the deep. Go and see the plesiosaurs, mosasaurs, and ancient birds as they once were: eating, breathing, swimming, living things. Then go and tell your friends and colleagues about it, and go back with them to see the movie all over again.