

BOOK REVIEWS

BOOK REVIEW***Sea Dragons: Predators of the Prehistoric Oceans***

By Richard Ellis

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Reviewed by Jim Patterson

No, this is not a book about Tasmania's seahorse relatives, but about the marine cousins of the dinosaurs. Much has been written about the dinosaurs but their marine cousins have not been given a great deal of attention in our literature. Richard Ellis is a research associate in vertebrate palaeontology at the American Museum of Natural History who has published widely on whales, sharks and the oceans. In this fascinating book he has gone some considerable distance to address the subject with an understandable text, but he has also given the reader a visual treat with his carefully drawn illustrations.

Sherlock Holmes would have been a quite successful palaeontologist. Palaeontology, like geology, is an intriguing whodunit which has fascinated scientists for centuries. New finds and new theories were often regarded by others in the same field with suspicion, scorn or outright hostile opposition. Ellis gives some amusing examples of this animosity, in one case citing Cope and Marsh, where "Marsh, in an uncharacteristic burst of generosity, named a *Masosaur copeanus*, with Cope in mind", adding that maybe combining Cope and anus was not so generous after all!

Most people have a fossil or two lying about the house, but some, like Dr. Gideon Mantell, become compulsive collectors. His wife left him, Ellis tells us, "because there was no more room left in their house...among other reasons".

Early in the book the author explores some of the imponderables, for instance, when all there is to work on are a few bones and a tooth and a fossil impression in a piece of Jurassic rock 150 million years old. From these clues it is possible to reasonably accurately reconstruct a plesiosaur, but the colour of its skin or whether it screeched, roared or grunted will never be known.

Why did these creatures die out? Ichthyosaurs were amongst some of the most highly developed reptiles that ever lived. We can only speculate. These are not my words. This is a reflection by Richard Ellis at the end of the chapter on ichthyosaurs. But that doesn't stop the experts hypothesising. Ichthyosaurs were to the oceans what the carnivorous dinosaurs were to the land, and for a similar span of time.

Well, one hundred million years gives plenty of scope for change. For change

to occur in the hunters as well as the hunted. If the hunted develop ploys to outwit the hunters and the hunters don't adapt quickly enough, they'll starve and eventually become extinct.

There's tremendous scope for serious detective work here and there's plenty of thought one could give to our own species – a Johnnie-come-lately on the world scene. What changes will we make to ensure our survival and dominance of the food chain? Will we end up as fossil remains for a future life-form to marvel and puzzle over? One hundred million years is a long time to stay on top. Will we make the grade or is our global greed already foretelling our extinction?

Ellis has an endearing appreciation of plain language, as far as it is possible when referring to these animals. He refers to a doctoral thesis on “intracorporal force transmission in plesiosaurs”, remarking that “these elaborate arguments for 'a force transmission system' are completely incomprehensible to me. I have included them under the assumption that others might be able to understand what she is talking about”. It is time that informed writers took the view that readers really want to understand what they are reading about and the best way to do this is to stop using phrases like “ventral elements of plesiosaurs are able to accommodate asymmetry of force direction and magnitude in anterior as well as bilateral wing pairs, intermobility of bony elements or distortion of the body as a whole”. Phew! Why do some people have to say large ventral body mass, instead of simply saying gut?

The imagination is taxed picturing one of these predators cruising up your favourite estuary and opening its huge gob to snaffle two or three adult dolphins; or with its head the size of a truck stuck in your bedroom - and the rest of its one hundred tonne bulk stretching out to the mail box.

Overall, a delightful book.