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#### DEDICATION

To my colleagues in creation ministry with the courage to take a stand rather than "go with the flow."

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## NTRODUCTION

### The Dragons in the Sea

Mention huge, awesome creatures roaming our planet and most people think of dinosaurs that lived mostly on the land. Fearsome giants like *T. rex* and plant-eating earth-shakers like *Brachiosaurus* are gone now, recalled only in the dragon stories of many cultures. Since the Curse on all of creation (Genesis 3) brought in death, disease, and

bloodshed to a once-perfect world, many types of creatures are no longer with us.

> The bones of such extinct animals (and sometimes bits of flesh and skin), along with the remains of many creatures that are still with us today, are found buried and preserved in

huge layers of rock. These layers were once mud or sand, laid down all over the earth by massive water action (Genesis 6–9). The preserved remains are known as fossils.

The fossils also tell us that some of the most spectacular monsters in all of creation were designed to live beneath the waves. Moviegoers shuddered by the millions at the rampaging great white shark portrayed in *Jaws*. Few would have been aware that it could have been swallowed whole by another type of shark, of truly monstrous proportions, that once also lived in our oceans.

Many people are familiar with the marine reptiles called plesiosaurs and ichthyosaurs. Very few, however, have heard of the mighty *Kronosaurus*, which could have had the average-sized ichthyosaur for breakfast. Nor do they know much about *Mosasaurus* and other sea monsters featured in this book — most extinct, but some still living.

#### Monsters in the Bible

The Bible mentions a creature called "Behemoth." This was obviously alive at the time the Book of Job, with its majestic poetic language, was written. From the description in Job chapter 40, it was the largest land-dwelling, grass-eating creature God ever made. The description of its tail moving "like a cedar tree" has perplexed many commentators who realize that it cannot be an elephant or hippo. Behemoth sounds much like one of the big land-dwelling dinosaurs.

The Scripture then talks of "Leviathan" (still used today to refer to a sea monster). This is clearly a marine animal, with fearsome teeth, and armorplated scales that shrug off spears and arrows. It is large and powerful, making the notion of its capture by humans appear ridiculous as the sea "boils" or "churns" in its wake.

#### Dolichorhynchops

The references to its flaming breath and smoking nostrils may simply be poetic descriptions of its fearsomeness. However, these references are intriguingly consistent with the recurring, ancient accounts of some dragons having similar features. The living bombardier beetle mixes highly reactive chemicals together to fire boiling hot blasts at its enemies. There is no biological reason why some creatures may not have had (for defensive or display purposes) similar built-in "chemistry sets" enabling heat and smoke to be produced.

The incredible range of God's creation included many awe-inspiring sea monsters, a few of which are still alive today. One of the extinct ones featured in this book may well have been the Leviathan of Job. All of them will open up a whole new dimension of fascination and wonder as we contemplate these real "dragons of the sea."



## Mosasaurus

magnificent predator, *Mosasaurus* was a sea-dwelling reptile that has been called

the marine equivalent of *Tyrannosaurus rex* — only much bigger. Known today only from fossils, mosasaurs (this is the name given to the whole group that includes *Mosasaurus*) came in a wide range of sizes. Some were truly huge. From their bones, it is estimated that some could have been up to 50 feet (15 m) in length, more than a four-story building on its side. If so, that would make such a creature the biggest predatory carnivore (flesh-eater) the world has ever known.

### Fast Facts

- Meaning of name: "Meuse River reptile"
- Length: up to 50 feet (15 m)
- Weight: 8-10 tons
- "Discovered": somewhere between 1766 and 1774
- Location of fossils: worldwide
- Nifty fact: The lower jaw of Mosasaurus was loosely hinged and moveable on each side. Just like some living snakes, this loose joint allowed it to swallow large prey.

The bones of mosasaurs have been found on every continent of the world, including Antarctica. They had long, snake-like bodies, and would have used their long, sinewy tails to propel themselves powerfully through the water with a side-to-side motion. These animals probably could not swim fast for very long distances, but would have been able to ambush their prey by



surprising them, and outswimming them in a burst over a short distance. Their broad, paddle-like legs were primarily useful for steering.

They had a long, pointed head with powerful jaws containing many long, sharp teeth. Although some of the other "sea dragons" in this book come close to the biggest mosasaurs in size — and some could have been fiercer, even possibly stronger — it seems that mosasaurs, so far, have the size record for such marine hunters.

Samples of fossilized skin have been found, showing that some mosasaurs had large dermal plates, called "scutes," covering their skin. It is not clear, though, whether these extended farther than the neck or throat.





However, other mosasaur specimens have revealed small scales, similar to the pattern of a rattlesnake, covering the whole body.

The name "mosasaur" comes from the River Meuse (or Maas) in Holland where the first fossil of this creature was found in the late 1700s. Another 70 years or so passed before scientists began to describe dinosaurs (the land creatures) whose fossils had been reconstructed. As research papers and textbooks began to make knowledge of the dinosaurs widespread, marine reptiles like mosasaurs were being discovered in increasing numbers, so they became associated in the public mind with an "age of dinosaurs."

Throughout this book the Fast Facts sections show the dates that the fossils of each creature (or the creature itself) were discovered. These dates are shown in quotation marks because for extinct creatures, it might actually be better termed "rediscovered." People were present from the beginning of creation (Mark 10:6), so ancient people probably knew about the existence of such impressive creatures in the sea, especially when many of them, like mosasaurs, needed to come to the surface regularly to breathe air. Even the ones that are not extinct would have been seen by fishermen and native peoples long before they were officially "discovered" by European explorers or scientists.

It is true that so far no one has found a fossil of a person together with the fossil of a mosasaur. Does that mean that mosasaurs lived millions of years ago before there were people? Hardly; the fish called coelacanths are known from their fossils, which are found in the same layers as dinosaurs, mosasaurs, and other reptiles. No human (or whale) fossils have been found in the same rocks together with coelacanths. Yet coelacanths

> definitely lived with humans and whales. How do we know? Because several populations of coelacanths have been found to be living today, on the same earth as people, whales, and many other creatures that we never find with them in the fossil record.

Coelacanth



People often think of the many types of marine reptiles, like mosasaurs, ichthyosaurs, and the like, as dinosaurs, but this is not so, strictly speaking. The same is true for the extinct flying reptiles, called pterosaurs. Dinosaurs, which spent a lot of their time on land, are placed in a separate major grouping from both marine reptiles and flying reptiles. So marine reptiles cannot be called "sea dinosaurs."



## Megalodon

leek, quick, massive, and with somewhere around 200 razor-sharp teeth, *Carcharocles*  about *megalodon* is based on the fossils that remain, but *megalodon* was a member of the shark family, and sharks' skeletons are composed of cartilage, not bone. Even if suddenly trapped and buried in sediment, as happened to billions of creatures worldwide during Noah's flood, the cartilage is much more likely to rot away than be

since its kind was first created, what we think we know

*megalodon* was one of the most feared predators ever to roam the seas. At 50 feet (15 m) in length or more, it was longer than a school bus. Its dorsal fin (the one on its back) would have stood about six feet above the water. A tooth from *megalodon* could be larger than a man's hand. With massive jaws that could open to seven feet, it could have easily devoured a small fishing boat in one bite.

Just like any other creature that is thought to have died out

### Fast Facts

- Meaning of name: "giant tooth"
- Length: 40 to 50 feet (12–15 m) or more.
- Weight: 20 tons or more
- "Discovered": 1843
- Location of fossils: worldwide
- Nifty Fact: With jaws that could open to 7 feet (2 m), *megalodon* could swallow a large great white shark whole!



preserved. A few fossilized pieces of *megalodon* skeletons have been found, but most of our speculations about this giant fish are based on the many teeth found. Being composed of a bone-like material and coated with enamel, they are more likely to be preserved.

These huge teeth resemble those of the present-day great white shark, only two-and-a-half to three times

larger. So scientists think this creature must have been like a great white shark times three! The tooth marks found in some fossilized bones of whales show jaw patterns which match the dimensions worked out for *megalodon*. In fact, whales were probably a favorite food. Sharks eat about two percent of their body weight each day. Even at a low estimate of 20 tons for





\_\_\_\_\_ 50 feet (15 m) -

*megalodon*'s weight, it would have had to eat about 800 pounds of food a day, and some scientists speculate that an adult *megalodon* may have weighed up to 65 tons! It's no wonder that these creatures chomped on some types of whales.

Sharks have three to five rows of razor-sharp teeth. They do not chew their food like humans do. Instead, they simply chomp and gulp, swallowing the meat in huge chunks. Their teeth often break off or fall out with all of that chomping, but it doesn't matter to the shark. A tooth from the next row will take the place of the missing tooth within 24 hours. A shark may go through 20,000 teeth in an average lifetime. That's why sharks' teeth are found in great numbers on the sea floor and beaches. So *megalodon* teeth, found all over the world, have probably mostly fallen out of a living shark, rather than being fossilized with it.

Some of these teeth appear remarkably fresh, which has led people to speculate that *megalodon* may not be extinct yet. In 1918, a group of lobster fishermen in Port Stephens, Australia, reported an encounter with "an immense shark of almost unbelievable proportions" that devastated their catch and left them in a state of shock. *Megalodon* would



not be the first creature, known from its fossils and believed to be extinct, to have later been discovered still living in the sea's massive depths.

While doing some maintenance on the dredge arm of the *Eagle I* (pictured), crewmember Jeff Sinclair discovered the *megalodon* tooth shown on the opposite page. The ship had last worked near the shoreline of Louisiana. The *Eagle I* is a dredging ship, a special vessel designed to "clean out" shipping channels throughout the world.

A tooth from a *megalodon* shark (actual size)

4"

A tooth from a modern-day great white shark

1"

Was megalodon simply a giant version of the great white? It is often given the same genus name, Carcharadon. But lately, due to some differences in the teeth, it is more often given its own genus, Carcharocles. However, this is controversial, because the larger the teeth of great whites, the more they resemble megalodon's. The two may well have belonged to the same Genesis kind.