

Marine biodiversity

Encounters with animals, a walk along the shore listening to the crashing waves, these can fill us with a sense of awe or wonder. This is one of the purposes of creation. Psalm 111 tells us 2 Great are the works of the LORD; they are studied by all who delight in them. 3 Glorious and majestic are his deeds, and his righteousness endures forever. 4 He has caused his wonders to be remembered; the LORD is gracious and compassionate. Professor R.J. Berry, formerly of University College London and past President of Christians in Science, has called Psalm 111 the research scientist's Psalm. We see here the Psalmist delighting in God's works and in turn studying them. Other versions use words here such as ponder. To mull over, to think about. This beauty in God's works are called glorious and majestic. Whether pondering, studying God's actions in human history or in creation, they lead us to contemplate God's character and when His works are rightly interpreted through His word, it can lead us to a deeper sense of awe, wonder and ultimately worship of the creator.

The ocean certainly can inspire awe or wonder. It is, though, quite easy living here in Oxfordshire to forget that we live on an island and that the majority of our planet is covered with water. Perhaps you haven't been to the sea in some time, can't swim, or haven't been bold enough to brave the chilly waters. But I hope today to inspire you by showing how the sea can fill us with a sense of wonder, help us to appreciate God's beauty, and give us hope for our current marine crisis.

The United Nations proclaimed 2010 to be the International Year of Biodiversity, and people all over the world are working to safeguard this irreplaceable natural wealth and reduce biodiversity loss. Interestingly, the website where I lifted the previous statement, follows it by this one “This is vital for current and future human wellbeing.” While this is true, there is so much more value to biodiversity than simply to meet our needs.

I don't know if you saw recent reports from a project called the Census of Marine Life. This is a ten year project that is concluding this year. This is a huge undertaking, but they are finding startling results. Deep in the sea there are huge numbers of creatures that we never knew existed. “Census research suggests that, within a particular size interval, more than 20 million types of bacteria live in sea water. However, a Dr. Baross, one of the researchers, notes: “The total number of species of marine microbes is likely closer to a billion.” Microbial cells in the oceans' water column number roughly 10 to the 30th (called a nonillion; expressed another way: 1,000 x 1 billion x 1 billion x 1 billion) and collectively weigh the equivalent of 240 billion African elephants. That's 35 elephants of marine microbes per person. Marine microbes are the tiniest cogs essential to planetary functioning. Yet until technological marvels of this millennium (especially high-throughput DNA sequencing) revealed the stunning extent of this microscopic world, it remained largely hidden from humankind.” For all these years of human history, they have been there, living out their lives, unknown to us, and frankly, still unknown to most people on the planet. Why are these creatures there?

When is the last time you have walked along a beach in Britain? If you have walked along a cobble beach you may think that our seas are devoid of life. This habitat does not support much life, relatively speaking, and much of what is interesting has washed up from deeper down. Sandy beaches are a bit more biodiverse, if you were to dig into the sand you might find all sorts of interesting creatures, marine worms, shells, and small crab-like animals. Rockpools if you remember from your childhood are full of interesting little animals and plants. Yet if you were to don a mask, and a thick wetsuit, you would enter a world full of colourful and bizarre creatures: sea urchins, sea cucumbers, starfish, eels, seaweeds all mostly unseen by the vast majority of people in our land. Even from shore, high on a cliff top, you can see amazing creatures such as dolphins, porpoise, seals, basking sharks, killer whales and a huge variety of seabirds. Why are these creatures there?

We could, of course, fall back on purely biological mechanisms and say that the evolutionary process is working itself out and this is simply a by product of the way in which God has chosen to create. However, I want to turn us back to God's word in order to interpret His works.

We don't have time to do this justice, but I want to focus on poor old Job for a moment. You remember his story. A wealthy man, lots of kids, livestock, land, great wife and friends. Satan asks God to test Job and God allows it. All is taken away. His wife and friends tell him to curse God and die, but Job will not. Yet he is, as is understandable, troubled by his misfortune. For 38 long chapters, Job and his friends speak of this

misfortune and try to find answers, then what may be some of the scariest words in the Bible addressed to a human occur:

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¹ Then the LORD answered Job out of the storm. He said:

² "Who is this that darkens my counsel
with words without knowledge?

³ Brace yourself like a man;
I will question you,
and you shall answer me.

What occurs over the next chapters is almost a course in ecology! God asks Job, rhetorically, of course, things like:

Where were you when I laid the earth's foundation?

What is the way to the abode of light?

Do you give the horse his strength or clothe his neck with a flowing mane?

Do you know when the mountain goats give birth?

Do you watch when the doe bears her fawn?

Do you count the months till they bear?

Do you know the time they give birth?

Does the hawk take flight by your wisdom?

You get the picture. Job responds "I am unworthy—how can I reply to you?

I put my hand over my mouth."

At the end of the book, Job speaks of his new understanding of God, repents – turns toward God – and he lives out a long and full life.

I find it interesting that God uses creation, biodiversity, if you like, to reveal his character to Job. To show Job things about himself. I think this gives us a hint at some of the overarching reasons for marine biodiversity, they are pointers for us to God. To cause us, like Job, to put our hands over our mouth, be quiet, and revel in God's beauty, His majesty, and be utterly amazed.

The ocean is there, though, to provide for all creatures, including humans, as anyone who has had a nice cod and chips will attest. It is true that we are taking more out of the sea than can be replenished. Pollution from the land is changing the sea in ways that could have disastrous consequences. And yet, I am hopeful. Why, because God is much more concerned about this than we are and He has again revealed Himself through His creation through the study of his works. One of the areas of marine biology that I study is called fisheries science. This is the study of marine creatures, how they grow, reproduce and how fishing affects this. We have a long history of fishing the oceans and have made huge changes in the kinds and numbers of fish in Britain's coastal waters. When the removal of these resources has gone unchecked, there has been destruction, waste and

consequently, populations have declined. It is estimated that fishermen have to spend 17 times as much effort today to catch the same amount of fish as they did 120 years ago. Four times more fish were being landed in UK ports 100 years ago than today, and catches peaked in 1938. God has asked us to be good stewards, when we are, He has given His creation the ability to be fruitful, to grow, increase and flourish.

There is huge evidence for this, but I want to share with you one bit which you may find interesting. The fisheries in England focusing on the North Sea prior to WWI were in strong decline catches of cod and halibut had plummeted. Dr. Callum Roberts of York University describes this in his book “The unnatural history of the sea.” He says that “Throughout Edwardian Britain, shops selling fish and chips were growing in popularity. Covering fish fillets with batter hid a multitude of sins.” The reduction in catches was hidden from the public by substituting lower quality of fish, but covering them with batter to hide it! When the war came, ships were sunk and also fishermen conscripted to fight. This led to an almost complete stopping of fishing. Once the war was over, the fish populations had grown and multiplied, fishermen had huge catches. But they didn’t learn their lessons and were unrestrained, populations plummeted again until history repeated itself and fishing ceased in the North Sea again during WWII. A few lone voices argued that we should be better stewards of this opportunity and restrict fishing to appropriate levels. But again, we were not good stewards of the fruitfulness God created and after several very good years of fishing, catches returned to pre-war levels. Giving the sea a Sabbath showed that when we are good stewards, living out the wisdom God has provided us with both in His word and through studying His works, the incredible abundance, the lavish Grace God gives us spiritually, is also observed in His creation.

Fish populations are designed to produce huge numbers of young, when stewarded, they can rebuild, grow and thrive.

Biodiversity does reveal God to us, when rightly interpreted through His revealed Word, the Bible. Most appeals for biodiversity conservation rely on its value to us or at times to the poor who do rely on it in ways most of us do not. But I hope that this morning I have given you another reason for acting. When we ponder, study God's creation we can be filled with awe and wonder, marvel at his beauty and be filled with hope because we see aspects of our maker in His world. My hope for you is that this moves you beyond environmental stewardship for the sake of good citizenship and that it leads you closer to God and ultimately results in worship, of the creator not the creation.

So, what is my task for you today? What difficult changes to your life am I going to ask you to make? I want to ask you to do something that may be more difficult than it might first appear. This summer, I want you to get out your bucket and spade, put on your swimming costume and head to the seashore here in Britain. Take a seaside holiday this year, go buy some local fish and chips, and enjoy the beauty and bounty of the sea. Marvel, be inspired, be awed, jump in with a mask if you dare. Read a Psalm or perhaps the entire book of Job for your beach reading. Let your experience lead you to worship the creator.