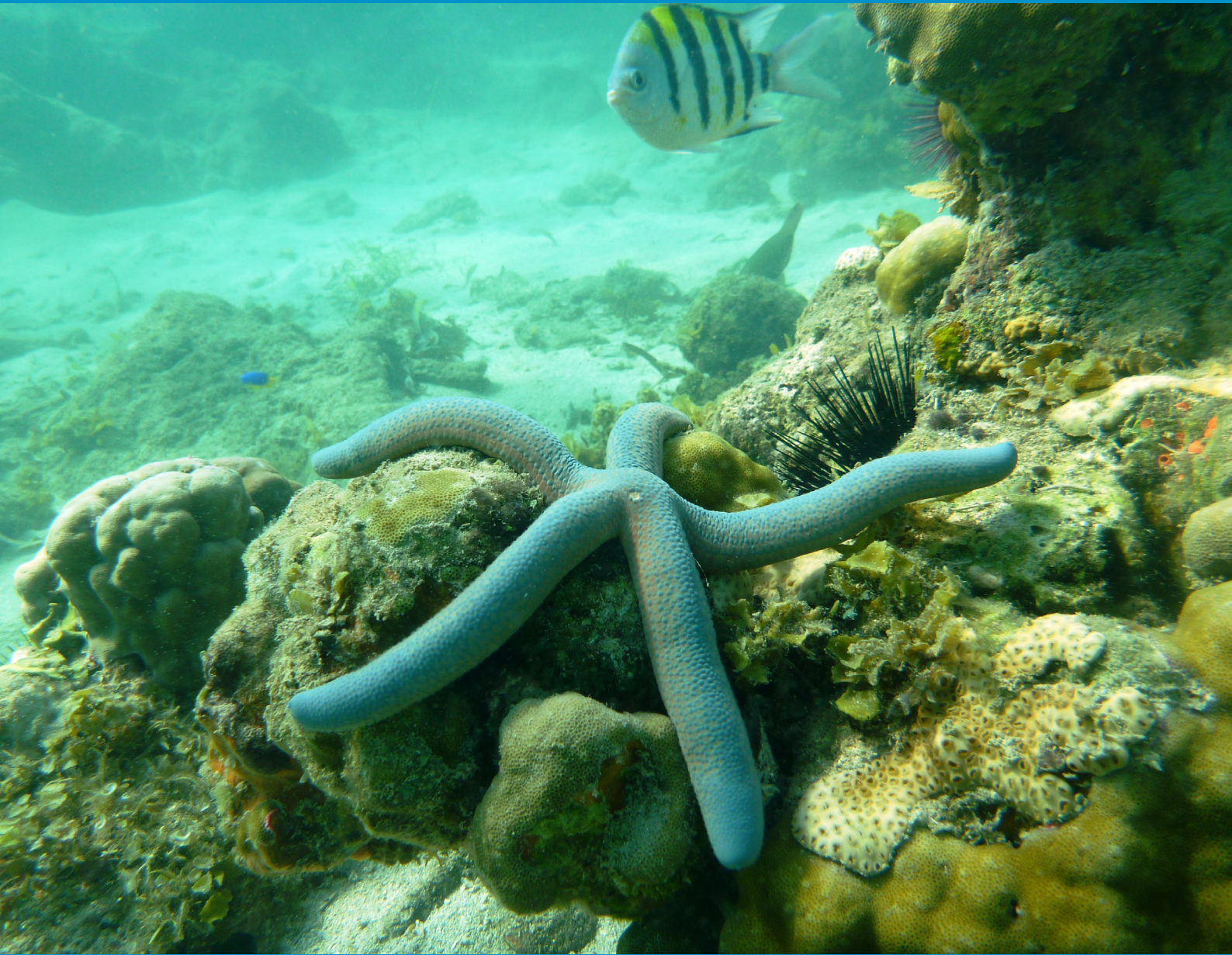


**Marine Devotional:
Reflections on God and the Ocean**



A ROCHA
MARINE
CONSERVATION
PROGRAMME

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Introduction

The ocean inspires and with intentionality can connect us to God. A Rocha's Marine Conservation Programme is now over 10 years old. Many students, volunteers, interns and researchers have contributed extensively to our marine conservation work. These are not always people of faith, but many are and find their experience in A Rocha a helpful connector of science and faith. Several years ago we put together some devotional resources developed by those who had actively spent time with A Rocha's marine conservation work. The time seemed right to gather reflections and thoughts on the ocean and faith from those who have recently given their time and talents to care for God's ocean.

Our hope for this resource is that you will connect with and be inspired by the ocean through the enclosed reflections and that the connections that the authors draw to their own faith will inspire you to draw close to God as well.

Robert Sluka
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<https://arocha.org/en/conservation/marine/>
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Salmon fry. Photo credit: A Rocha Canada

Pacific salmon: the ocean depths nourish the freshwater stream

Marjorie Lieuwen, Conservation Science Coordinator, Houston BC, A Rocha Canada

I was born and raised in Winnipeg, Manitoba, Canada, far away from any ocean to the east, west, north and south. My primary experiences of the ocean have actually been in Western Australia, while visiting extended family. As we would lose track of time, captivated by the waves crashing on rocks and shore, the words of Psalm 93 as put in the Genevan Psalter consistently echoed in my mind: 'But mighty though the thundering floods may be, far mightier than the breakers of the sea, is he, the LORD, who sits enthroned on high, the King whose name we praise and glorify.'

A few years ago I met and married my husband Jason and we have made a home together in his hometown of Houston, in Northern British Columbia. I am still quite a distance from the ocean, but there is a creature connecting the far inland reaches of BC to the ocean: the Pacific salmon.

I work in a stewardship salmon hatchery, the Buck Creek Hatchery and Nature Centre, A Rocha Canada's Northern BC project in Houston. We raise and release up to 10,000 Coho salmon *Oncorhynchus kisutch* fry each year into the Upper Bulkley River watershed. It would take me about 5 hours to drive along Highway 16 from Houston to Prince Rupert, the port city at the mouth of the Skeena River. Along the journey you catch many glimpses of the Upper Bulkley, Bulkley and Skeena rivers until the Skeena empties into the Pacific Ocean. If I were to take this journey in April or May, a host of small salmon fry would be taking a parallel journey, swimming with the river current to the ocean. At just one or two years old and the size of a grown man's finger, they carry the scent and memory of their home stream with them but have been called away for a time.

The fry's striking parr marks, which are the stripes on their body that camouflage them in the stream, begin to fleck off as they transform into bright silver smolts. Their body chemistry changes in the estuary as their kidneys adjust to live in saltwater. And then they swim out into the ocean depths, now with kilometers of water surrounding them, now with the sea lion, the orca, the shark and the fisherman seeking them as prey. In the ocean the salmon feasts on the rich abundance of shrimp, squid, anchovies, herring and even baby crabs. Their silver brilliance grows as they put on weight. The largest Chinook salmon to be caught was 126 lbs or 57 kg, demonstrating how Chinook have earned the nickname 'king' salmon. The average adult Chinook weighs 20 lbs, while the other species average from 5 to 15 lbs. In the ocean salmon congregate in large schools, helping them to confuse predators, effectively hunt together and travel long distances together.

After quickly increasing in size over three to five years, the Skeena salmon *Oncorhynchus nerka* are signaled by their internal clock to return to the mouth of the Skeena and journey to their freshwater home stream. Believed to be influenced by the Earth's magnetic field to locate the river mouth, they then rely on their environmental memory and use scent to find the stream where they hatched. To preserve their unique genetic history as well as to maintain the broad range of Skeena populations, each adult salmon migrates to their home stream. Swimming upstream for kilometers on end, scaling rocky canyons and waterfalls and escaping fishermen, they do not take time to eat but rely on their body fat accumulated in the ocean. When they finally reach their home stream and approach spawning time they are a shadow of their former ocean glory with little biomass remaining, and yet become a brilliant sight, transforming again to brilliant reds, purples and greens in order to attract a mate for spawning. After the female lays her eggs in a rocky nest (redd) in the riverbed and the male fertilizes them, the adult salmon will eventually die and become food for bears, birds and insects. As their bodies break down, the rich nutrients from the ocean bring new life to the freshwater environment. A beautiful connection of this complex food web is that the insects feeding on the adult salmon will later be food for the next generation of baby salmon to hatch and grow in the river. The ocean nutrients also support trees, mushrooms and other plants to create a healthy stream environment.

As you may sense, I could go on and on about this amazing life cycle. But now let's reflect on how marvelously God has equipped the salmon for each stage of its life. They are wonderfully created.

While reflecting on biblical connections that can be drawn to the salmon I considered the person named Salmon in the Bible, the father of Boaz and ancestor of Jesus Christ. Of course he was not named for the fish! Nor was the fish named for the man Salmon. The fish was named from words originating in Middle English with the meaning 'to leap'. Some relate the name Salmon from the Bible to 'shalom', meaning peace, similar to Solomon. But in other concordances the name is thought to be derived from the Hebrew word 'salmah', meaning garment or a mantle. How fascinating that this is quite fitting, as the salmon undergoes many 'costume changes' as God gave them the camouflage and brilliant garment needed for each life stage.

As I delved into the life of a salmon at sea I reflected on the beautiful instinct salmon have to live together in schools for protection, to eat together and travel together. We as Christians are also so blessed to live in our church communities with the fellowship with which God blesses us. 'How good and pleasant it is when God's people live together in unity!' (Psalm 133:1) 'Though one may be overpowered, two can defend themselves. A cord of three strands is not quickly broken.' (Ecclesiastes 4:12)

After a salmon dies it nourishes the freshwater stream environment with ocean nutrients. How wonderfully God provides for his creation. Let us be assured of God's provision and care for us as Jesus said, 'See how the flowers of the field grow. They do not labour or spin. Yet I tell you that not even Solomon in all his splendor was dressed like one of these. If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, will he not much more clothe you, you of little faith?' (Matthew 6:28b-30) And so trusting in God's care and protection a Christian will be 'like a tree planted by streams of water that yields its fruit in its season, and its leaf does not wither.' (Psalm 1:3)

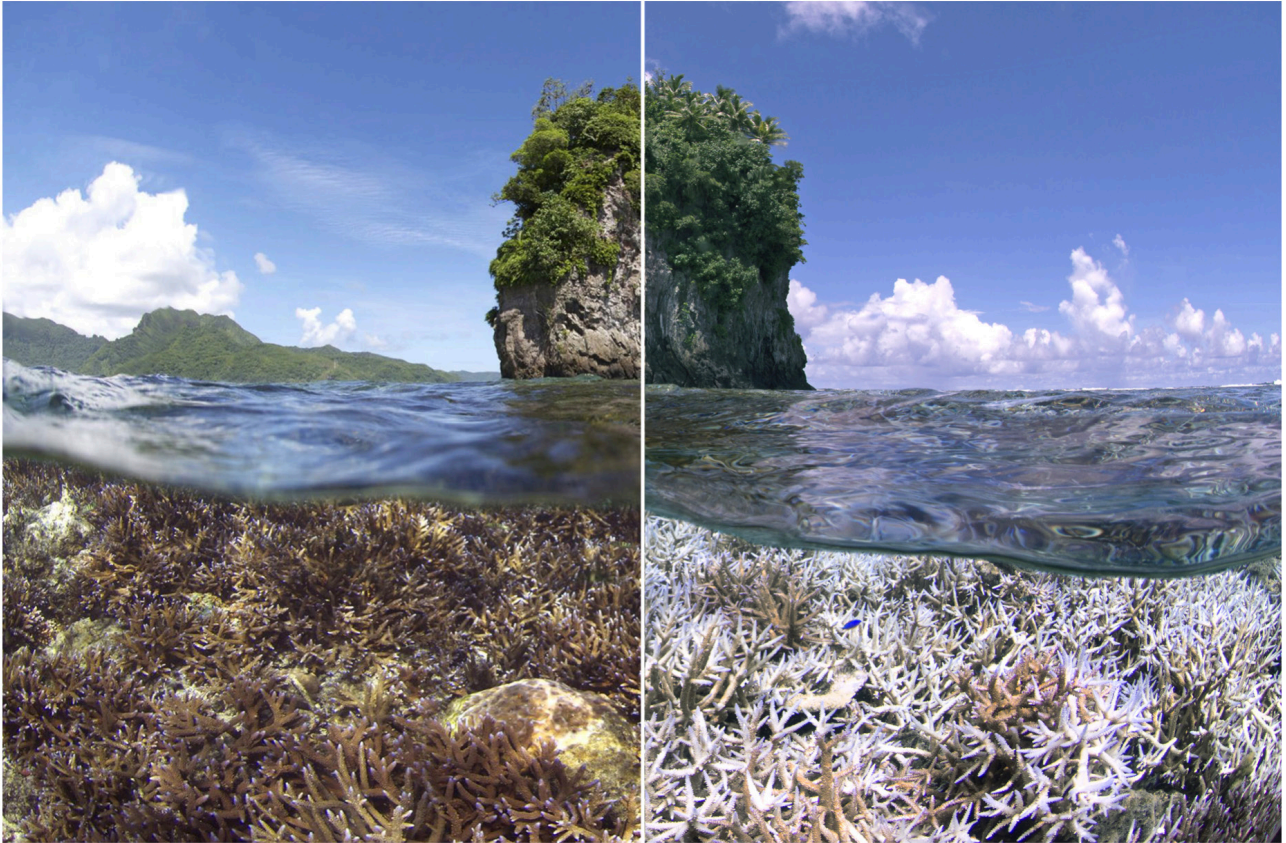
Reef-building corals and fruitfulness

Dr. Margaret Miller, SECORE International and volunteer with A Rocha USA

'Look at the birds of the air; they do not sow or reap or store away in barns, and yet your heavenly Father feeds them.... See how the flowers of the field grow. They do not labor or spin. **29** Yet I tell you that not even Solomon in all his splendor was dressed like one of these. **30** If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, will he not much more clothe you—you of little faith? **31** So do not worry, saying, 'What shall we eat?' or 'What shall we drink?' or 'What shall we wear?' **32** For the pagans run after all these things, and your heavenly Father knows that you need them. **33** But seek first his kingdom and his righteousness, and all these things will be given to you as well.' (Matthew 6:26, 28–33)

Modern translations of the Bible frame these exhortations of Christ as precluding our human tendencies toward anxiety and worry about provision of our basic needs as well as our desires for beauty and, perhaps, fashion. But this begs the antecedent question about how God provides these needs. This question is answered in other places in the Bible, including Genesis 1 where God gives the energy of the sun and all of the plants and fruits and seeds he has created to humans and other animals to meet their needs for food. Greater details about the 'how' of God's provision are given in Psalm 104, including a description of how God's created world provides for a self-replenishing water recycling system which meets the needs of the land, the beasts of the field and the birds of the air. This water system, in turn, provides grass for cattle, prey for the lion, and enables agricultural systems to provide both basic needs for human food as well as for our comfort (wine to gladden our hearts and oil to make our faces shine [v15]). Science has deepened our understanding of these mechanisms of provision, including soil ecosystems that recycle needed substances like nitrogen and phosphorus, a tremendous richness of fellow creatures that help provide equilibrium in natural provisional systems as well as beauty and awe, and a planetary, atmospheric system that maintains a stable, livable climate for all. It is no wonder, then, that God commands humans first and foremost to care for creation. Our neglect of this most basic commandment has now put the most basic aspects of God's provision for humans and all creation at risk, as well as God's testimony to his own majesty, power and divine nature that are observable in his created world (Romans 1:20).

My vocation is to understand and attempt to improve the human-impaired fruitfulness of one realm of this interwoven system of God's provision. Reef-building corals are animals that build rigid structures that protect coastlines from erosion and storm flooding, provide habitat for myriad other creatures, and bless humans with protein, beauty, and other livelihood benefits. God specifically commands sea creatures (whom he loves) to be fruitful (Genesis 1: 23). However, human failure to maintain appropriate coastal water quality, balanced levels of resource extraction, and especially, a stable climate are now impairing corals' capacity to fulfill their commanded, God-given purpose of fruitfulness and provision to their fellow creatures (including us). The summer of 2023 brought a marine heatwave to the west Atlantic/Caribbean region that was not just record-breaking, but imposed three to four times the previous record of heat stress. This has resulted in mass mortality of corals, further impairing their fruitfulness, their beauty and the services they provide to other creatures. Humans must repent and better heed God's call to care for creation in order to help maintain God's promise of provision to all creatures.



Before and after images of heatwave-induced coral bleaching in American Samoa in 2014-5.
Photo credit: [XL Catlin Seaview Survey](#).



Heat-stressed and dying Elkhorn coral in the Florida Keys in summer 2023. White areas are unhealthy (bleached) while the brownish areas are already dead and being overgrown by algal turfs.
Photo credit: [Shireen Rahimi](#).

Engaging our ocean world (1): thankfulness for the ocean as a realm of our planetary home

Tim Stojanovic, University of St Andrews, Scotland and lead investigator on a marine governance project linking St Andrews, A Rocha Ghana, Kenya, A Rocha International, and Natiora Ahly (Madagascar)

The ocean is the world's largest biome with a volume of 321 million cubic miles and a vast diversity of plants and animals. Traditionally divided into five major oceans (Atlantic, Pacific, Indian, Arctic and Southern), some people point out that they form a single world ocean, linked by a giant circulation of waters called the 'ocean conveyor belt'.

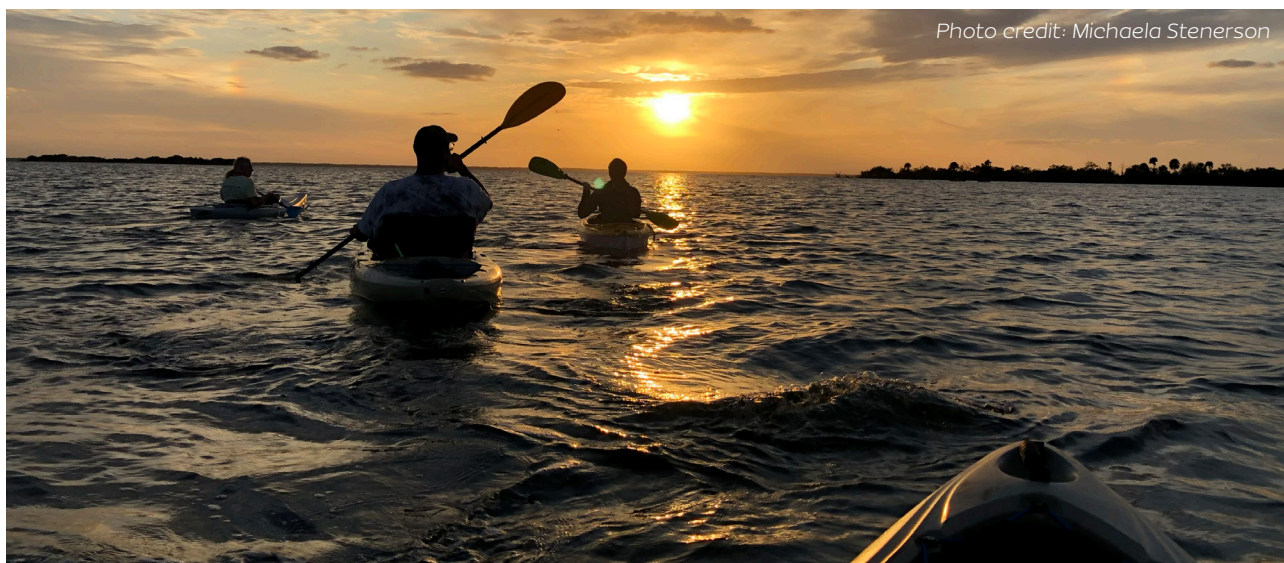
Opening up to God's revelation:

The Bible starts with the story of God's creation of the sea and the creatures in it (Genesis 1:9–10, 20–21). Read these verses of Genesis in two translations of the Bible. What do these verses say about the character of the ocean creatures God created? And God's feelings about it?

Let's respond to this revelation by praying for all the people of the world and ourselves, that we will recognise the oceans belong to God and are a gift from God:

Starting Prayer:

Lord, help us to recognise the oceans (and all of creation) belong to you and are a gift from you. We are so thankful for the world you made including the salty, blue ocean. Today we choose to depend on your wisdom, not our own strength as we reflect on how we can live out our lives in relation to this part of your creation. Amen.



Reflect on God's 'book of creation': What do you appreciate about coasts and seas?

For example, my daughter has fond memories of trips to islands on a ferry; I very much enjoy the traditional British meal fish and chips; my son often asks to go rock-pooling or watch sealife; as a family we are intrigued that our nation's energy supplies are increasingly drawn on the immense wind/wave/tidal resource that the seas provide; my father-in-law has taken up sea swimming and finds it invigorating.

Thank You Prayer:

Lord God, I thank you for your sea and what it has meant to me (tell God about a specific example you are grateful for...). Lord, I also thank you for what the sea does for us whether I know about it or not, like keep the temperature of our planet habitable, or provide our society's energy. Lord, I praise you that you are a good God who loves to give us good things. Lord, I ask that you would teach us your ways to steward your creation. Amen.

Opportunity for Response:

Look in an atlas or Google Earth and find out about a part of the world's oceans you didn't know. Speak to God about what you find out and tell Him your reflections, **OR** go down to the sea and take a walk nearby to enjoy God's creation. As you walk, engage in conversational prayer with God to talk to Him about what you see. What might God be seeking to communicate with you?

Engaging our ocean world (2): lament for our lack of care for the ocean

Tim Stojanovic, University of St Andrews, Scotland and lead investigator on a marine governance project linking St Andrews, A Rocha Ghana, Kenya, A Rocha International and Natiara Ahy (Madagascar)

All forms of life modify their environments, but it seems like there is difference between doing this in sensitive, fitting and careful ways versus greedy, lazy and careless ways (see for example Deuteronomy 22:6-7). Perhaps you know about parts of the world's oceans where problems have been caused by overconsumption or pollution? Perhaps you know about parts of the world's oceans where people have protected, restored or collaborated to use the ocean and its bounty sustainably?

Opening up to God's revelation:

The Bible seems to make it clear that if we are to govern the oceans effectively and justly, then we will need to depend on God and His wisdom.

This is what the Sovereign Lord says: 'In the pride of your heart you say, 'I am a god; I sit on the throne of a god in the heart of the seas.' But you are a man and not a god, though you think you are as wise as a god' (Ezekiel 28:2)...Therefore learn to be wise and develop good judgement. A life of doing right is the wisest life there is. (Prov 4:5, 11 Living Translation)...And what does the Lord require of you? To rule justly and love mercy, to loose the chains of injustice and treat people fairly. Then the Lord will guide you continually. (Micah 6:8, Isaiah 58:11)



Beach cleanup event in Argentina.
Photo credit: Analia Milanessi

Let's respond to this revelation by saying sorry and expressing our sadness, and our hope that we will act more in alignment with God's good ways.

Lamenting Prayer:

Lord God, forgive us our sins. Have mercy on our societies. We are sorry for our laziness and carelessness—things we do without thinking of their consequences, and things we don't bother to do. Bring us to our senses and teach us the difference between right and wrong, and help us by the power of your Spirit to do the right. Reveal to us your good intentions through the beauty of your creation. Amen.

Reflect on God's 'book of creation':

What are the pressures on the oceans near you which cause problems for plants and animals living there, or for people who depend upon the ocean?

Investigate some more about a problem in the world oceans—start small by finding out about the ocean somewhere nearby, **OR** start big by watching an internet video clip on a national or international 'State of the Oceans' report. In reflecting critically on what you found, how does this tally with the Christian principles that: humankind is created gloriously in the image of God; that our fallenness has negatively affected our relationship with God and creation; and that God has reached out to redeem and reconcile all things to him?

Opportunity for Response:

Find out who is taking action to solve problems you discovered. Is there anything you want to do practically or through commitment to prayer?

Engaging our ocean world (3): wonder at fellow creatures which live in the sea

Tim Stojanovic, University of St Andrews, Scotland and lead investigator on a marine governance project linking St Andrews, A Rocha Ghana, Kenya, A Rocha International and Natiara Ahy (Madagascar)

Kelp forests are formed from seaweeds. These forests of the sea provide a home for other plants and animals. Sea rod *Laminaria hyperborea* is one of the kelp I sometimes see washed up on our local beach, and also when I used to sail past the kelp beds at Lundy Island. I love it when I see a long one (2 metres) intact with a holdfast (like a bird's foot) which acts as its root—it makes me wonder what rocky seabed it was washed up from.

The Crisp pillow coral *Anomastreaa irregularis* is a small brown coral that lives in shallow rock pools along the tropical coast of East Africa. One of the remarkable characteristics of corals is how they live in mutual dependence (symbiosis) with single celled algae—it makes me wonder all the things we are still yet to discover about marine ecosystems.

Opening up to God's revelation:

Job 38–41 is one of the longest sections of the Bible about the physical planet and wild animals. Read the section about the sea (Job 38:8–11) or the Leviathan (Job 41:1–34).



Crisp pillow coral *Anomastreaa irregularis*.
Photo credit: Robert Sluka

Why does God speak to Job a lot about plants, animals and creation?

Richard Bauckham (theologian) writes, 'these imaginative portrayals reorient Job in his world... the other creatures have their own lives given them by God...and we see God's sheer joy in his creatures, their variety and idiosyncrasies.' Let's pray in response to this:

Thank you prayer:

Father in Heaven, we praise you that the intricate beauty we see in the world reflects your character. Please give us a heart after your own heart to care for the world. As we recognise that you are the creator, and we along with our fellow creatures are the created, open our minds how your good precepts might entail us to live differently in solidarity with wild animals and the sea. Amen.

Reflect on God's 'book of creation':

Have you met fellow creatures who live in the sea, through TV documentaries, on holiday or for work? Choose one plant or animal from the sea and reflect on: (1) your practical interactions with it (directly or indirectly); (2) your emotional connection with it; (3) your memories associated with it; (4) the benefits it brings to communities or societies; and (5) how your current relationship with God influences your relationship to it?

Opportunity for Response:

In the light of the above wonders, consider how you can respond to God's invitation to rest.

¹ see <https://www.marlin.ac.uk/species/detail/1309>

² See Baker <https://arocha.or.ke/wp-content/uploads/sites/16/2015/04/Anomastreaa-irregularis-a-Vulnerable-coral-of-the-rocky-intertidal-zone-of-Watamu-Marine-National-Park-Kenya.pdf>

³ Richard Bauckham (2010) Bible and Ecology. p.51

Engaging our ocean world (4): enthroning God as Lord of our lives and Lord of the oceans

Tim Stojanovic, University of St Andrews, Scotland and lead investigator on a marine governance project linking St Andrews, A Rocha Ghana, Kenya, A Rocha International and Natiara Ahy (Madagascar)

Oliver O'Donovan (theologian) discusses where we might get direction from and suggests: 'If we see creation (and its natural patterns) as a gift, then we can choose to respond to this gift, and this turns out to be a freer and better ethical directive for responding to ecological concerns. Nature requires an ethic of harmony between humans and the environment, which comes from beyond nature...We recognise God as the giver of all good things. In this way our wonder at the world becomes worship of God.'⁴

Opening up to God's revelation:

The waves of a sea were the place where two Bible characters chose to act on their faith in God. Jonah was trying to run away from God, but called out to God when on a ship in a storm (Jonah 1:9–2:9). Peter saw Jesus walking across the Sea of Galilee and stepped out in faith to meet him (Matt 14:25–33).

In what ways did these two Bible characters struggle with doubts about God? How did God show his faithfulness to be trusted as Lord by these two people?

Commitment prayer:

God, we recognise that our greatest need is for you, the all wise, just and loving God to be the Lord of our lives and of the ocean. Holy God, I pray that you will soften the hearts of those whose relations with the ocean are driven by greed and ruthlessness—please burst the bubble of their false idols, and give them a vision for shalom. Holy Spirit, reveal to me where I need to grow more in your fruits: love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control. Finish the prayer with any commitment you want to make to God.

Reflect on God's 'book of creation':

How do you see others around you responding positively to God's lordship, specifically in humanity's interactions with coasts and seas? Where might we learn from mistakes? Where might we get inspiration?

Opportunity for Response:

Sing or listen to a worship song that will help you reflect on your choice to live life daily trusting God. If you can't think of a particular song, then perhaps use the words of the hymn 'All Creatures of our God and King' modelled on the sayings of the patron saint of ecology St Francis, **OR** engage in some other form of creative activity (drawing, craft, photography) in which you can use an image of the sea to express a sense of commitment to God.

⁴ O'Donovan, O. (2022) Creation and the Recovery of Reality. In: St Andrews 2021–2022 Gifford Lectures: The Disappearance of Ethics

First or last?

Kristel van Houte, National Director, A Rocha Aotearoa New Zealand

'How many are your works, Lord!
In wisdom you made them all;
the earth is full of your creatures.
There is the sea, vast and spacious,
teeming with creatures beyond number—
living things both large and small.' (Psalm 104)

Spotted on a recent diving trip to the Poor Knights Islands off the North Island of New Zealand, I was delighted to watch these creatures swim while I reflected – who is first in your eyes, God?

All washes away and is put in perspective when we are in the ocean.
We become insignificant in the vastness of the sea.
Water brings new life, and what before seemed too much suddenly becomes much lighter.

There, among the seaweed, the salty spray and rumble of waves.

It is calm again.

The tide recedes, the sun sets and another tide builds. Capturing everything up to the high tide mark all over again.

The ocean, teeming with creatures, offers us an opportunity to look at the same things with new eyes. A reminder that we are just a small drop in a very big ocean.

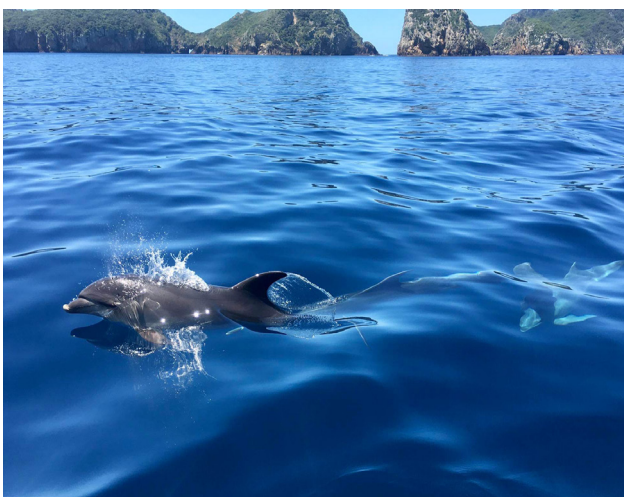
This scripture dares us to consider everything we have (and think) in this world.
And turn it upside down.
Emerging from ignorance, we dive deep under each wave, and then our eyes are opened.

What do you see?

As you break through the water's surface, embrace all of life and our place in the earth's ecosystems. With knowledge comes responsibility.
And a call to action.

Reflect and observe these magnificent marine mammals—the ocean is their home.

Who is first in your eyes, God?



*Dolphins near Poor Knights Islands, New Zealand.
Photo credit: Kristel van Houte*



Mudflats at Wadden Sea.
Photo credit: Dorothea Seeger

First trip to the sea

Dr. Dorothea Seeger, Friends of A Rocha in Germany and past marine researcher for A Rocha Kenya and participant in the A Rocha research expedition to the Mediterranean that led to our plastics projects globally

Last weekend I went to the Wadden Sea. It was the first time I went to the sea since my son was born six months ago. I love the sea and as a marine biologist I am also professionally connected to it. So, I was curious to see how my son would like his first trip to the sea at his rather young age. The moment I went onto the mudflats with him—sleeping in the baby carrier in front of my stomach—was very special. My feet in the mud, my gaze sometimes into the distance, sometimes onto the surface of the mudflats, where the traces of countless animals and plants give an idea of the extremely high biomass in the mudflats—and the special smell. Home and a place of longing for me. It was very special and beautiful. My son slept most of the time, but just before we went back to the bike, he woke up and seemed to enjoy it. The question in my mind was whether he would still be able to experience the Wadden Sea 'when he grows up.'

Two days later, my son, my 70-year-old mother and I were standing on a wooden bridge over the salt marsh. And while the other tourists flocked to the beach in droves, we took a break and enjoyed the song of the skylarks. Mostly invisible, they flew high above the salt marsh and sang characteristically. My mother was quite moved, as she hadn't heard larks for several decades. Despite overtourism, over-fertilization, littering and other problems (I'm not exactly familiar with the biology of larks...) and thanks to the national park and the efforts of many people, the skylarks sang so beautifully and typically here.

In the evening there was another beautiful concert of larks and other birds over the salt marsh and in the forest behind the dyke. Full of hope for the next morning and hopefully a future for mudflats, salt marshes, skylarks and lugworms.



Bob Sluka swimming with a whale shark *Rhincodon typus*
Photo credit: Steve Dresselhaus

Swimming with whale sharks

Dr. Robert Sluka, Lead Scientist, Marine Conservation Programme

Our quarry lay ahead, a long, thin shape near the surface of the water, its distinctive white spotted pattern showing clearly. This was a smaller individual, some 7 meters (20ft) in length, about half the size of the maximum. We had been driving up and down a particular coastline searching for an hour or so and finally had found a whale shark. Our guide, known for his care for these species and concern not to cause harm due to boat collisions or too close human contact, instructed us to get in the water with our snorkel gear and follow him.

These sharks are the largest of all fish and have huge mouths—with very tiny teeth. Their prey, the tiny planktonic animals, causing the murkiness in the water. These whale sharks find patches of dense food and spend time swimming through them sucking in huge amounts of water and filtering out the tiny animals for their meal. The pace is usually leisurely from a fish's perspective, yet still a brisk swimming pace for a human. We swam with this individual and others that joined us for a long time. If I had a bucket list, this would have been on that list—yet I confess to still feeling like the experience was manufactured.

How do tourism, wildlife experiences and adventure go together? I had a similar feeling visiting a game park in South Africa. Yes, it is true these animals were in a massively large area, living in habitats in which they normally live, feeding off each other and the land, but there was a fence. These whale sharks were not fenced in, yet the tour guides knew about the place where they were often found and we went there especially to see this. In a slightly more manufactured way, my experience in Hawaii swimming with manta rays at night felt similar. These huge animals had been attracted by the lights of nearby hotels which congregated plankton and so chose to be there—but the boat with its line of buoys to hold on to and additional lights to bring the animals even closer seems more like an experience you might find somewhere like Seaworld. Maybe I value serendipity in animal encounters. Does the manta ray that just happened to swim by me in the Maldives while doing my research count as a more authentic experience? It feels that way, and yet there are species endemic (only found in that place) to particular localities that you would only see if you specifically went there to see them. The Banggai cardinalfish *Pterapogon kauderni* springs to mind, only found around a few isolated islands in Indonesia—and now through the aquarium industry in most pet shops in the world. Does going down to my local pet shop and seeing the Banggai cardinalfish count as actually having seen it?

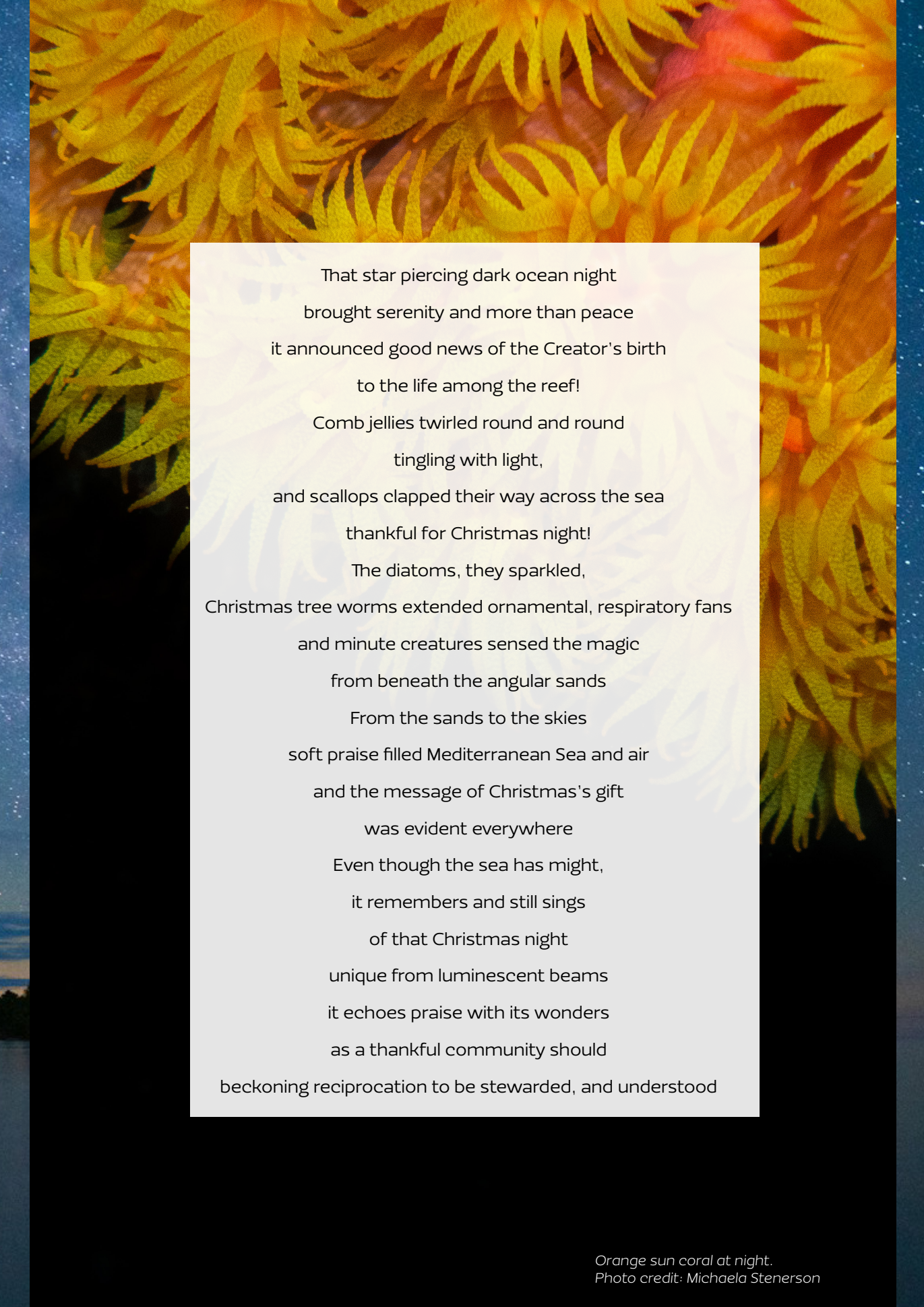
The ocean's star

Katharine Sell, former A Rocha USA intern

Once upon a Christmas Eve
under melodious waters still,
'twas not the light of moon beams bright
that pierced deep seas of krill
Numerous planktonic creatures
and majestic cetaceans traveled to see,
a great source of light and life:
a star piercing through the night across the reef

The glorious light infiltrated
the ocean's transparent water molecules,
while shimmering on slow, lapping crests
and glimmering within the water
among creatures still in rest

Sea stars somersaulted with excitement,
polyps extended into drift and dance,
and dolphins leapt at the surface
while Humpbacks sang their chants



That star piercing dark ocean night
brought serenity and more than peace
it announced good news of the Creator's birth
to the life among the reef!
Comb jellies twirled round and round
tingling with light,
and scallops clapped their way across the sea
thankful for Christmas night!
The diatoms, they sparkled,
Christmas tree worms extended ornamental, respiratory fans
and minute creatures sensed the magic
from beneath the angular sands
From the sands to the skies
soft praise filled Mediterranean Sea and air
and the message of Christmas's gift
was evident everywhere
Even though the sea has might,
it remembers and still sings
of that Christmas night
unique from luminescent beams
it echoes praise with its wonders
as a thankful community should
beckoning reciprocation to be stewarded, and understood

*Orange sun coral at night.
Photo credit: Michaela Stenerson*



'Christ of the Deep' statue at Key Largo National Marine Sanctuary
Photo credit: Michaela Stenerson

An ocean of plastic hope

Dr. Robert Sluka, Lead Scientist, Marine Conservation Programme

One way of thinking about sustainability can be found in the biblical book of John Chapter 10, verse 10. Jesus proclaims that he came to give abundant life. Often when we reflect on sustainability we emphasize restraint, reducing and perhaps a sense of loss. However, Genesis 1 gives us a picture of the ocean as a place of teeming abundance, diversity and fruitfulness. Pictures of God's goodness throughout Scripture focus on his lavishness which we sing of in that simple chorus 'How wide and deep and long and high is the love of God.' God's vision for the sustainable life then is not so much John the Baptist in the desert, but the heavenly banquet prepared for us.

We are subverting that vision of the abundant life through our own creation—plastic. Natural fruitfulness and ecological cycles are interrupted by plastic which does not break down or get naturally recycled, as does the rest of God's creation. We think we need more time so we buy 'disposable' plastic plates, which in fact never go away! We think we can save money and buy something plastic which we can then throw away rather than something that will last.

All of this 'saving' of time and money ultimately costs us—often time and money—but also our health, mental and physical, and the health of our planet. Plastic does not go away. The deepest ocean depths are littered with our plastic. Clean up the big bits of plastic and there will still be loads of microplastics. Plastic breaks down into smaller and smaller pieces called microplastics, pieces of plastic less than 5 mm (3/16 inch) in size.

The science of microplastics is still in its infancy. However, it is becoming clear that these small pieces of plastic are getting into food webs. Krill in Antarctica, which are a small crustacean which whales thrive on eating, are digesting microplastics. The problem is that they are only becoming nanoplastics! Birds appear to have a particular affinity for the small plastic that has been in the ocean and many individuals have been found their stomach full only of plastic. We don't know yet what this means for human health and well-being. These small plastics appear to be like sponges for toxins. Are these toxins bio-accumulating up the food chain, similarly to toxins such as mercury? Scientists are working on this question, but if ever there was a need for prudence it is likely here in our appetite for plastic products.

Determine in your heart that God's plan for the planet and for you is goodness and abundant life through Christ. Reflect on how you are subverting that plan through how you use plastic. Sustainability will lead to an abundant life for all—people, places and all the life they hold.

Peace on earth, good will to manatees

Dr. Robert Sluka, Lead Scientist, Marine Conservation Programme

Advent and Christmas remind us that the Christ-child came to bring peace. We remember that we need peace with God and that his birth, life, death and resurrection makes that possible. We also remember that we need peace with our neighbour. But does Christ's birth have anything to do with bringing peace between us and animals? In this case, does the advent of Christ mean goodwill to manatees?

There are only about 6,300 manatees left in Florida, though this is an increase from 1,267 in 1991. The species in Florida is known as the American Manatee or, more commonly, the West Indian Manatee *Trichechus manatus*.

What do these numbers mean? There are many ways in which to prioritize and assess conservation status for species. One widely used tool is the IUCN Red List. Experts utilize historical and current research on population size, species biology, habitat use and threats, among other metrics, to judge how endangered a species is globally. West Indian manatees are judged to be Vulnerable, which is one step before endangered.



West Indian Manatee *Trichechus manatus* in Florida.
Photo credit: Bob Sluka

Loss of warm water habitat, red tides, seagrass loss and watercraft-related injuries are the primary causes of manatee mortality in Florida. There is really good conservation work going on, and populations seem to be going up.

I write this sitting beside Weeki Wachee Spring (no, I didn't stay for the mermaid show!). Signs for boaters here say, 'Slow, no wake. Manatee zone'. Though there are still too many manatee deaths due to boat collisions, laws limiting speed in certain areas has helped populations to increase.

When we slow down from our haste to get to the next place, we not only decrease the chance of running over a manatee, but we also get a chance to see the gently swaying seagrass, the mullets schooling, turtles sunning themselves and maybe even a cheeky alligator or two. It will take us longer to get to our destination, though.

We all know we should slow down from time to time—we need a Sabbath rest. Maybe it is idealistic, but I don't think the whole of Christmas season has to be lived at a frenetic pace.

If we slow down, there is a real and likely danger we will not finish something or not be able to do as much as others or as we'd like to, but perhaps there is higher probability that we will protect something very valuable and see some things along the way we would have missed.

Resting from our consumerism, drive to accumulate and rush to get from place to place will reduce our impact on our world. In Advent, we wait. That waiting can bring us peace—peace that Christ gives us, not based on how much we have or can buy. That is good news for us, and for all species.

Christ's birth reminds us about peace. In her book, *Just Living*, Dr. Ruth Valerio states that this peace is 'peace with God, peace with others and peace with the wider creation.'

When we slow down—buy less, consume less, give more—Christmas truly is peace on earth and goodwill to manatees.

⁶ https://www.fws.gov/news/ShowNews.cfm?ref=u.s.-fish-and-wildlife-service-to-reclassify-west-indian-manatee-from-&_ID=35428

⁷ There are two subspecies of manatees roughly equating to the Florida population and the Antilles population.

⁸ Status and Threats Analysis for the Florida Manatee (*Trichechus manatus latirostris*), 2016 By Michael C. Runge, Carol A. Sanders-Reed, Catherine A. Langtimm, Jeffrey A. Hostetler, Julien Martin, Charles J. Deutsch, Leslie I. Ward-Geiger and Gary L. Mahon.

Christ, the pelican of mercy

Autumn Ricksecker, Communications team, A Rocha International

I am a lover of birds but a very poor birder, so the most striking and strange looking birds (which are easiest to identify) quickly become my favorites. Thus, I'm filled with delight and adoration at every pelican I see. It's easy to spot the Brown pelicans *Pelecanus occidentalis* that fly to and fro along the California coast, where I live. The Cornell Lab of Ornithology describes them as 'a comically elegant bird with an oversized bill, sinuous neck and big, dark body. Squadrons glide above the surf along southern and western coasts, rising and falling in a graceful echo of the waves.'

A love for pelicans is deeply rooted in Christian tradition. You will see them often in western liturgical spaces: set in stained glass, embroidered onto vestments, and painted on murals. At my church, we often sing the hymn 'Humbly I Adore Thee' by Thomas Aquinas, which extols this 'comically elegant' species:

'Pelican of mercy, Jesus Lord and God, Cleanse me wretched sinner in thy precious blood: Blood, whereof one drop for humankind outpoured, might from all transgression have the world restored.'

This image of Christ as a 'pelican of mercy' comes from Christian bestiaries. Immensely popular in medieval Europe, these books of beasts described animals and their attributes, as well as their religious meaning. Every creature was seen as a reflection of God in the world. The story of the Pelican of Mercy comes in many forms: an early legend has it that during times of famine, a mother pelican would strike her breast and feed her young with her own blood. Another version, written in the earliest bestiary (the *Physiologus*, 3rd or 4th century AD) tells a darker version:

'The little pelicans strike their parents, and the parents, striking back, kill them. But on the third day the mother pelican strikes and opens her side and pours blood over her dead young. In this way they are revived and made well.'



St Bartholomew's parish church, Nettlebed Oxfordshire.
Photo credit: [Creative Commons Attribution-Share Alike 4.0 International license](#).

The text goes on to explain that humankind has struck our Lord by turning towards sin and death; therefore, our Lord Jesus Christ ascended to the cross, where his side was pierced and he poured out blood for our salvation. It's fitting that an image of the mother pelican feeding her young can be found on altar frontals, where the Eucharist is prepared—an ongoing remembrance of Christ's loving sacrifice.

This maternal image of Christ is not too far-fetched. In fact, it fits with his own self-description: 'How often have I desired to gather your children together as a hen gathers her brood under her wings, and you were not willing!' (Matthew 23:37b) This intense motherly love extends to all of us 'wretched sinners', and even to all creation, as the Aquinas hymn makes clear. Even a single drop of Christ's blood poured out for humankind will restore the entire world.

We know today that pelicans do not feed their young with their own blood, but it's easy to see how early Christians made this mistake: some species have a red-stained bill and a red spot on their chest. However, the goal of bestiaries was not pure naturalism, but to explore the spiritual reality of ordinary creatures. It's easy to draw poetic reflections from a majestic seascape or the interconnectedness within an ecosystem. But I think we Christians are out of practice on pondering the strange and perplexing behaviors of animals and relating them to our Creator God. May the humble pelican (and every other creature) draw our thoughts and affections to our Saviour.

Facing the waves: when principalities and power seem to knock us out

Aline Nussbaumer, A Rocha France, past A Rocha Kenya researcher

I am eight years old. We are visiting the west coast of France on vacation, and, for the first time, I am immersed in the rough waters of the Atlantic Ocean. My dad is with me, holding my small body as I brace to face the powerful waves. We do not venture far out, yet it does not take long before I get caught by a breaking wave, sucked under the surface and tumble back to shore. Under the water, holding my breath, disorientated, I think I am dying. But soon the distance between my body, the sand and the surface of the water is shortened, and I emerge, washed up and in need of being cleaned up, since my hair was a mess of sticky black oil and sand: residue of a recent oil spill. What followed was a rigorous scrub under the cold beach showers and the deep rooting of a respect for the power of the ocean that is still with me today.

This experience has been on my mind these past months as I underwent another watery experience—that of carrying an infant in the waters of my womb. If anything has taught me that control is an illusion, the last weeks of approaching and meeting a due date is it. No amount of stair walking, hanging upside down off the bed and bouncing on an exercise ball could convince my body to go into labour before it was ready.

As I have engaged with and lamented environmental and marine issues—whether it be the type of sticky oil spills I remember from that beach ordeal described above, discovering the multitudes of types and sizes of plastic pollution whilst sieving sand on Mediterranean beaches, following the politics of cycles of UN Climate Conference of Parties (COP) meetings or International Panel for Climate Change (IPCC) reports, reading current news of mass coral bleaching events—I have wondered if anything you or I do makes any kind of difference.

Financial and political forces that bend towards death and destruction are present and powerful, seemingly capable of knocking us out and submerging us. For example, the insatiable demand for cheap new clothing in the west is fueling the plunder of resources, pollution of water bodies from byproducts of textile dyeing (eg. ammonia, phenol), leather tanning (eg. chromium, cadmium) and the prevalence of cheap low-quality synthetic fabrics that release microplastic filaments into waterways. As we purchase these items, mega-corporations such as ultra-fast fashion brand Shein are becoming unimaginably rich (2022 profits estimated at 22.7 billion dollars). Their wealth has the stench of death—death of ecosystems (several of the waterways in Dhaka, capital of Bangladesh, have been classified as 'biologically dead' because of factory effluents, a large part of which is related to the textile industry), loss of dignity and safety for workers at different stages of production, death of artistry and creativity of local textile industries, and numerous other effects. Talking to my friends and family about these issues or using laundry equipment that prevents microfiber pollution seems a ridiculous attempt at resisting such a giant.

Paul writes in Ephesians that 'our struggle is not against flesh and blood, but against the rulers, against the authorities, against the powers of this dark world and against the spiritual forces of evil in the heavenly realms.' (Eph 6.12)

Timothy Gombis explores the significance of these 'principalities and powers' in his book, *The drama of Ephesians: Participating in the Triumph of God*. The Church is to identify where these powers are at play in corrupting God's good world and to call them out. Gombis adds a second task:

'But the job is not done yet. The second task of the church is resistance, which Paul mentions in Ephesians 6.10–13. This is not a purely negative task but involved the people of God imagining new and renewed patterns of life that are redemptive and life-giving. We resist participating in broader systems of injustice and exploitation and pray for wisdom to forge creative pathways of renewal that are redemptive and life-giving and represent a return to shalom. We then go to work to put into practice new ways of embodying human life according to God's original design for humanity. We resist social patterns that exploit others and create new social practices and patterns that foster human dignity and the enjoyment of God's good world.' (p.57, emphasis my own)

Our job is not to control the powers, for we are far too weak for that, but to align our life with the One who has disarmed the principalities and powers and triumphed over them by the cross (Col 2.15), the One who is Lord over all angels, authorities, dominions and powers (1 Pet 3.22, Eph 1.21): Jesus Christ.

Many of us who engage as Christians in the work of caring for Creation are familiar with Paul's writing to the Romans in chapter 8.18–25. This passage is a beacon of hope, a sure and steadfast anchor,



Photo credit: Michaela Stenerson

for us who feel knocked out by the waves of the powers of money, political corruption and all that bends towards death and decay. The image of childbirth brings up not just the pangs of contractions but also the wait: sensing the small changes that confirm imminent birth yet that give little away regarding when the final event will take place. If all is well, the last weeks of pregnancy require patience and acceptance that the baby will come when it comes. Yet all the stair walking, hanging upside down off the bed and bouncing on an exercise ball that I was doing in the waiting was my way of entering into and preparing for what was to come.

Our wait for Christ's ultimate reign must be active. We must live as children of the light and expose the fruitless deeds of darkness (Eph 5.8–11). And we can have hope that Christ's resurrection power is at work in us through his Spirit, that the full armour of God equips us face the powerful waves with confidence, and even if we spectacularly wipeout, Christ's victory is sure.

For further reflection:

Read Ephesians 5.8–17 and 6.10–17.

- In which areas of my life do I make compromises with the 'fruitless deeds of darkness'? Take a moment to repent before the Lord and ask him for his grace and wisdom to 'live as children of the light'.
- If you have anger towards inaction, corruption and greed of others, take time to pray for them, knowing that 'our struggle is not against flesh and blood'. Pray that they might be freed from the 'powers of this dark world'.
- Picture yourself on the shoreline, in your bathing suit, being battered by waves. Now picture yourself in the same place wearing the full armour of Christ. Picture Jesus as he met the powers of death and decay head-on at the cross. What did that look like to those looking on?
- Pray for 'wisdom to forge creative pathways of renewal that are redemptive and life-giving and represent a return to shalom' (Timothy Gombis). What might that look like in your current place and community? What might that look like for the oceans?

GETTING INVOLVED



Photo credit: Ali Argün

PRAY

Join us in praying for marine conservation issues, and for those working to bring God's kingdom of restoration. Follow A Rocha International on social media or check out our website for updates on how A Rocha's marine work is progressing, and how you can pray for it. Ocean 5_Kenya_Ali

DONATE

Donate to marine conservation efforts, including A Rocha International's Marine Conservation Programme.

<https://arocha.org/en/give/>

VOLUNTEER

A Rocha has marine activities going on across the globe. Why not come and volunteer with us to help our existing projects? Or volunteer to organize an event to raise prayer and financial support in your community? Contact us for more information at <http://www.arocha.org/en/opportunities/>.

LIFESTYLE

Simple changes to our daily life can alleviate some of the pressure on the marine environment, and are a way to express our worship to the Creator of all things. Consider how to reduce, reuse and recycle your waste. A Rocha's Plastics Toolbox has many resources which can help you do this at www.arocha.org/plastics-toolbox.

Websites such as <https://www.mcsuk.org/goodfishguide/> can help you consume seafood in a responsible way. <https://www.beatthemicrobead.org/> has lists of products containing plastic microbeads which enter the marine environment. Making an effort to reduce your carbon footprint will help reduce ocean acidification.

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