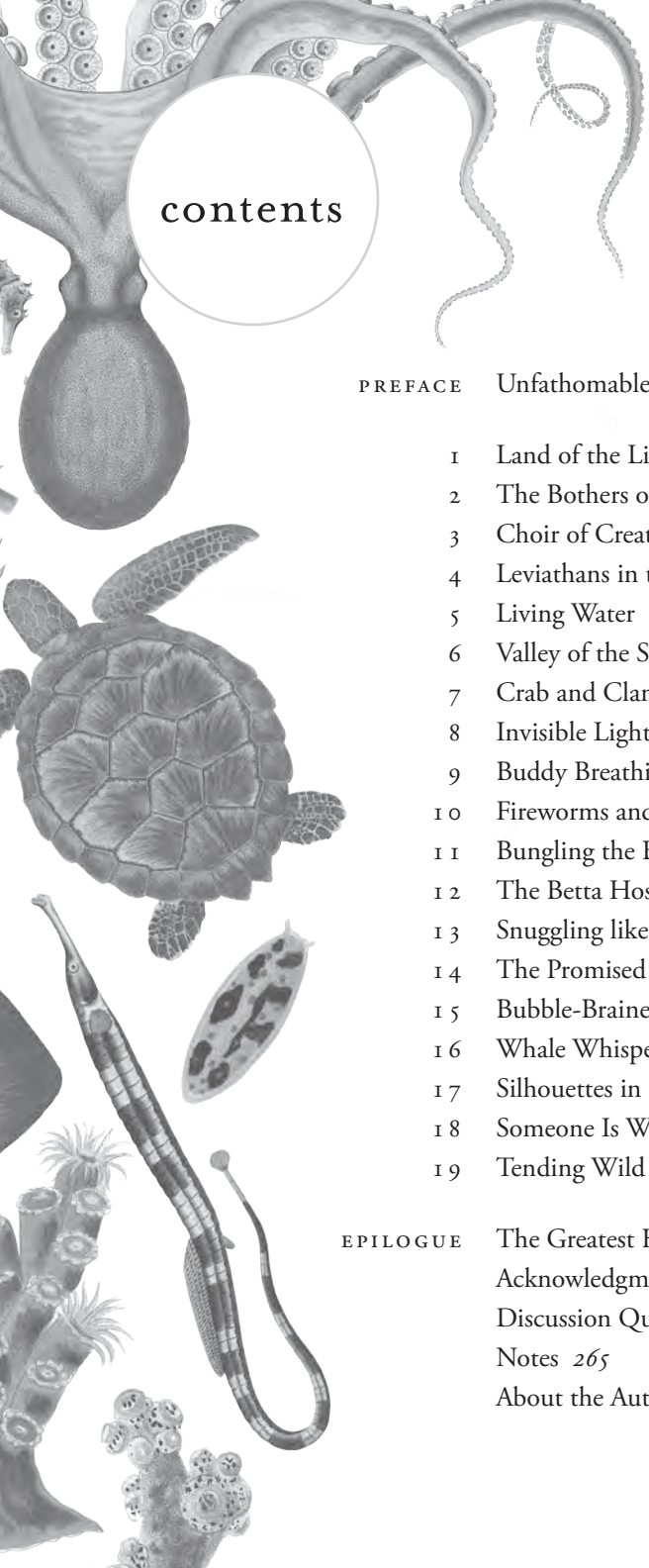


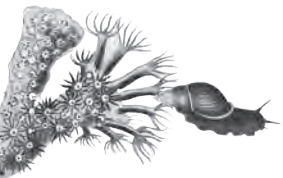
contents

PREFACE

unfathomable seas

My eyes focus on the still surface of the water, reflecting gray coastal sky. This tide pool is just deep enough that my ankles would get wet if I stood in it. But I would never step into one because they are filled with beauty and life. Tide pools serve as temporary homes to creatures that get caught in crevices of rock when the tide goes out, washing over long rifting patches of land that trap them in puddles as the waters recede. Like pockets of the vast ocean, each pool holds its little wonders.

As I carefully dip my hand into the water, ripples fan out over its small surface, distorting reflections. And suddenly, there are the creatures. Glossy red threads of marine algae. Pebble-like shells of striped periwinkle snails. Clusters of clamped mussels so darkly purple they seem black. A brisk-walking fiddler crab, with one arm bigger than the other. Fuzzy green, Jell-O-looking sea anemones



with sticky tentacles. The occasional jellyfish, translucent like the moon on a clear night. Even a rough-textured orange sea star, clutching tightly to the sides of a pool with its tender but amazingly strong tube feet.

Tide pooling is a bit like searching for truth. Both take intentionality, gentleness, and time. Nets and buckets are helpful for tide pooling, and maybe there are tools that can help us find truth too—tools like good books and trustworthy people. Just as living creatures can be hurt by rough handling, there is a risk of harm if we do not handle new concepts, ideas, and thoughts with care. Sometimes critical thinking can feel like sweaty labor while squatting on sharp rocks under the sun, but if we are willing to do it, we will find it well worthwhile. As we pull up unique, surprising, and biodiverse things, we might even come away feeling as though we have discovered treasures.

Both faith and science are necessary for truth-seeking because exposure changes perspective. What can be seen from the shoreline is different from what can be seen from the edge of a boat, which is still different from what can be seen sixty feet below the water's surface. If we live our whole lives on the shore, what might we miss?

Faith moves science off-land. It takes all the observational and experimental processes, scoops them up, and runs them out to sea. Faced against what are sometimes giant waves and what at other times is flat calm, faith forces science to grapple with that which cannot be observed with the naked eye or experimented on with even the greatest of theoretical cunning. Science is limited to what can be quantified and qualified, felt with assured evidence and firm as the ground underfoot. But like a boat speeding out to open

sea, faith pushes beyond these limitations. Boundless and free, it brushes the wind through our hair and sprays salt on our skin. It explains what science cannot, touching the soul and guiding us along life's journey. But just as science without faith is landlocked, faith without science floats on the surface.

My own interest in marine science was piqued at a young age. Growing up making annual family pilgrimages to the Washington and Oregon coasts, I learned the ocean first through its tide pools. These pockets of briny water held colorful treasures that I longed to explore with my eyes and poke with my fingers. Brushing back tufts of algae from the pools' edges, I quickly found that crabs pack a pinch, sea anemones stick and squirt, and sea urchins poke and pierce. But despite all the tingling soreness in my curious fingertips, I was entranced by the complex and colorful creatures I discovered there.

The lessons I learned from tide pools took longer to translate to my life as a young Christian, however. Chief among these lessons was the realization that science takes faith deeper. With all its questions, doubts, and critical thinking, science forces penetration into the depths. Science does not allow faith to stagnate with surfacy ideals, trite religious comments, and immature beliefs. Like a weight belt on a scuba diver, science pulls faith into amazing, otherworldly, and challenging places where we might otherwise never choose to go, places that provide incredible opportunities to learn and grow. I felt this tug as a girl kneeling beside a tide pool, wondering what other creatures lurked in the ocean before me. You might say my training as a marine biologist—which has taken me to the reefs of Australia and southernmost Florida—began right there. Even then, I was beginning to understand that science engages us in conversation with the world, inviting us to commune with people and creatures as diverse as the fish in the sea.

For me, that conversation expanded exponentially while I served as the lead coral biologist at a national park situated on an island seventy miles from Key West—closer to Cuba than to the United States mainland. My work at the park allowed me to learn by application that which faith teaches in theory. But it also reinforced my belief that science can no more do the job of faith than faith can do that of science; we need both.

I should clarify that when I refer to faith throughout this book, I'm talking specifically about the Judeo-Christian tradition. The reasons for this are fourfold. First, I write from the perspective of a practicing Christian because I am one. Any self-aware Christian contemplating science is bound to encounter questions about whether faith and science can (or even should) relate. As a professional marine biologist who loves God, I find myself uniquely positioned to encourage such people. For the early career scientist who is also contemplating Christianity, I am here to address the overlapping dialogue, that internal push and pull between being a scientist in training and a disciple in training.

Second, Christianity (which began as an outgrowth of Judaism) teaches that the physical is as sacred as the spiritual. The creation of the world and humankind was not some heavenly accident or cosmic sneeze from an aloof divine being. Christianity and Judaism are unique among religions in that they declare that humankind was created for relationship with God.

What's more, while the early Christian church made significant contributions to the development of the biological sciences, there have been periods throughout history of what might be called persecution of the sciences. It is both common knowledge and unfortunate fact that modern-day Christianity is frequently poised in opposition to the advances of modern science. This must be addressed.

Finally, Christian faith and science seek the same thing—to know Truth. I've capitalized the *T* on *Truth* here because both faith and science pursue what is ultimately true—the biggest, realest, most actual Truth. From a faith understanding, this Truth points directly to God. From a scientific understanding, this Truth is always the goal, the objective toward which every theory and principle is aimed, the end to which every hypothesis and experiment is directed.

Because of this, the evidence, examples, and explanations provided through the stories in this book come from a diverse set of sources, with credible research and helpful quotations from Christians and atheists alike. Beyond seeking to identify what is true, I have not discriminated among sources. Every inclusion is trustworthy within its realm of study and communicates a useful piece of relevant wisdom. Scripture, along with Bible-believing theologians, pastors, and trustworthy leaders in the faith, is regularly quoted. Similarly, long-standing scientific theories, principles, and examples are referenced, along with direct quotes from scientists who are leaders in their fields.

With such a wealth of sources to consult, let me briefly clarify some terminology. When referring to the physical world, scientists tend to use the word *nature*, while Christians often use the word *creation*. As both a scientist and a Christian, I use these words interchangeably, but it is important to note that "in the Judaeo-Christian tradition, the word 'creation' has a broader meaning than 'nature,' for it has to do with God's loving plan in which every creature has its own value and significance. Nature is usually seen as a system that can be studied, understood and controlled, whereas creation can only be understood as a gift from the outstretched hand of the Father of all, and as a reality illuminated by the love which calls us together into universal communion."[1]

For our purpose of understanding the integration of faith and science from a marine biology–based perspective, we will lean into these definitions. I reserve the term *nature* for talking about the created world from the perspective of raw science, void of faith-based implications. I use *creation* to describe the natural, created world, which includes humans. Furthermore, I refer to *humankind* to describe humanity as a whole, including humans across space and time.

Science and faith may do different things along their search for Truth, but like the water that flows between low and high tide, we need them both. To judge one without the other is to forsake half the wonders we are meant to experience. While this collection of stories is centered around the unique experiences I have had in my professional scientific career, it is grounded in what the Creator—God—has taught me through those experiences about the world he created, the meaning behind it, humankind's purpose and place, and where everything is heading. This is a deep dive into ecology and theology, meant to explore the spaces where sacred and supposed secular intertwine. My intention, both in this piece of writing and in life, is to explore the integration of faith and science from the perspective of a Jesus-loving coral biologist with the goal of knowing the Creator and his creation better. While these stories may serve as simple inspiration or entertainment to anyone who loves nature and is curious about the reality of life as a marine biologist, the discussion of these experiences courses deeper, being ultimately an exegesis of marine biology.

We are like creatures living within tide pools, trapped in the intertidal zone between the water's edge and high tide line. Perhaps

we have lost sight of the ocean. Perhaps there is something greater than the tiny pool where we currently reside. We long to know that God, the one who made and sustains our world, is active in each of our personal lives and has a good plan. As the tide sweeps in and out in frothing sea-foam and steady rhythmic time, he encourages us to explore. We can ask questions, conduct research, and consider thoughts and doubts that perhaps we never have before. It may be scary. It may even be a long journey. To a creature who has spent its whole life in a tide pool, the ocean would indeed seem scary and far away. And yet we wait at the shoreline, ready to be intentional, gentle, and brave, and to take our time.

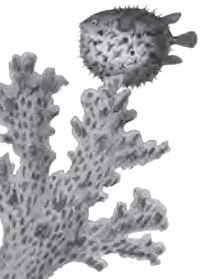
As we figuratively run out to sea and dive deeper, we will rejoice, weep, and labor alongside the created world. We will wrestle with hard questions of meaning, life, suffering, and death. We will discover that, even when we can't currently see it, God is actively working to redeem and restore not only his creation but each of our stories. We will consider both biblical wisdom and scientific discovery as means of understanding the unique life experiences provided to a marine biologist. And ultimately, as we seek to understand these unfathomable seas, we will discover the character of God, who "made heaven and earth, the sea, and everything in them" (Psalm 146:6).

1

land of the living

One of my longtime friends lived at the Windjammer. When he saw you, he'd meander out from his little dwelling in the cleft between two large brain corals. You'd notice his pudgy eyes first, inky black with iridescent purple irises. His mouth protruded in a miniature curve, always a gentle smile. His patterned tan-brown body bulged in the front, tapering toward the back. From the sides, two little fins whirligiged through water. He puttered along, a perfect porcupinefish. I called him Porky.

We were both surprised when we first saw each other—he so doggedly sleepy from the cozy nap he'd been taking, me from the distraction of the enormous corals that created his home. It was my first trip to the Windjammer, and I was awestruck by the tremendous colonies growing on the vertical hull of the shipwreck and the torrents of brilliantly flashing amberjacks schooling before me. A large



pink crab stealthily scuttled over the encrusted debris, clipping his claws at a pair of territorial purple damsels before vanishing into a hole. Pointy-nosed needlefish danced jaggedly under the surface where the water crested over the tip of the wreck, breaking down in bubbly explosions. A goliath grouper nearly the size of our dive boat haunted the moving shadows below, his faint outline a contrast to the flashes of patrolling barracuda, silver and toothy. Amazingly textured corals colored emerald, ruby, amber, amethyst, and sapphire gleamed in the shallow sunlight. Over yonder, purple sea fans beat in slow motion with the current, invisible vibrations shivering their intricate branches, like leaves of a tree lightly rustling in wind. As fish darted and gathered and rested, fronds of the soft coral thicket swayed left then right, beating back and forth to a never-ceasing rhythm of life. It was all a marvelous wonder to me. For Porky, it was just another day in the neighborhood.

The Windjammer is unique not only for the incredible plethora of creatures inhabiting the site but because of the shipwreck itself. Having sunk in 1907 while en route from Florida to Uruguay, the 261-foot *Avanti* was discovered in Dry Tortugas National Park in 1971 by an archaeological survey crew.[1] It took several decades to identify the wreck, during which time the site was named the Windjammer. While the cause of the wreck is unknown, the bow and stern were severed and lie adjacent to each other over several hundred feet of sandy habitat, with an array of midship wreckage jumbled between them, which creates plenty of interesting focal points for snorkelers and divers.

Heavily encrusted with corals, the Windjammer serves as the substrate for a remarkable array of creatures. After surfacing from our first dive at the site, my diving buddy proclaimed, "That is the most coral-y dive I've ever done. Those were the biggest coral colonies I have ever seen!" The enthusiasm was heartfelt. The vibrant

colors and ever-changing movements of the wreck's community were beyond-words beautiful. The corals made our jaws fall open. The fish made us want to laugh. The structure of the wreck was fascinating. Something about the Windjammer moved a diver's soul.

The site was beloved. We went back time and again, always seeing something new, yet always seeing Porky—happily living as the solitary porcupinefish at the wreck. I loved to check up on that little fish. He'd scoot out of his cleft between the corals, waggle his tiny yellow fins at me, and then leisurely cruise over to the sea fan field. But I wasn't just diving at the Windjammer for fun; it was my job.

I was performing disease reconnaissance—swimming with the flow of the current, checking every coral within five feet on either side of my path, and documenting data on the makeshift clipboard I held. My eyes scanned each coral for the stark white lesions indicative of a notoriously violent disease, stony coral tissue loss disease (or SCTLD, for short), which had been sweeping along the Florida Reef and Caribbean, rapidly killing twenty-one coral species in its wake.[2]

Any reliable ecologist will tell you that disease is an expected and integral part of healthy ecosystems. A disease develops when an organism (parasite or pathogen) manipulates the body and function of another organism (the host) within an environment. Similar to how periodic wildfires can be beneficial, adding nutrients back into soil and clearing out cluttered habitat space, a moderate amount of coral disease has the power to regenerate and revitalize a reef.

In many ways, the environment dictates the success or failure of a disease to originate, intensify, and spread. In an environment

where everything is well-connected (like the ocean, where water is ever flowing and ever mixing), transmission rates can spike. When the environment is primed with the perfect set of conditions, and potential hosts stand vulnerably exposed, it is only a matter of time before parasites and pathogens take hold, leading to a more widespread, impactful, and potentially deadlier disease—a true disease "outbreak" or event. Out of balance and disproportionate to the function of their environments, disease outbreaks are ecologically harmful. In recent years, humankind became personally acquainted with the intensity and transmissibility of a coronavirus disease outbreak, as the virulent COVID-19 discovered its perfect niche and created a global pandemic. I once heard someone say that SCTLD is the COVID of corals. They were wrong; SCTLD is far more deadly, killing over half of infected corals.[3]

Considered an "unprecedented" coral disease outbreak for its expanding geographic cover, number of species impacted, and tremendously high mortality rates, scientists were in a frenzy to determine both SCTLD's cause and cure.[4] Because the disease originated near Miami in 2014, it has been hypothesized that a long-buried pathogen was unearthed during standard port dredging.[5] It could be argued that the pathogen causing SCTLD has always been present in the environment, mildly free-roaming, existing on minute and unnoticeable scales. Perhaps the environmental balance tipped in its favor, with corals being under tremendous stress from a world that is changing more rapidly than they are capable of adapting to.

In late 2020, I was hired as the coral biologist and lead of the Coral Response Team for Dry Tortugas National Park, a park that is more

than 99 percent of the most beautiful tropical blue water you can imagine. At that time, Dry Tortugas was the only bit of the Florida Reef yet to be infected with SCTLD. Reachable only by boat or seaplane with the nearest civilization seventy miles away in Key West, Dry Tortugas boasted over 30 percent coral cover compared to the rest of Florida's 10 percent cover.[6] Coral cover is a metric for measuring density. Thirty percent cover means that if you looked at a random piece of the ocean floor and calculated how much of it was coral versus sand, algae, rubble, and everything else, 30 percent of it would be live coral. By that measure, Dry Tortugas was the most brilliant gem in the crown of Florida's coral reef.

Reefs are made of corals, which are incredibly cool animals. Individual corals are colonies composed of polyps—little clones that work together to gather food, distribute nutrients, fight competitors, and grow bigger. These polyps are also phenomenal chemists. They pull ingredients from the surrounding seawater to form calcium carbonate, a hard material used to grow their skeletons. And these coral skeletons are what create the foundation of coral reefs.

You might consider corals to be the architects of hustling, bustling, underwater metropolises. Although reefs cover only one percent of our oceans, they support 25 percent of all life in the ocean. Not to mention, it's estimated that one billion people benefit from reefs, which provide food for coastal communities, natural coastline protection against storms, important compounds used in medicine, and tourism that supports economies.[7]

As a coral biologist, I considered myself a steward of these phenomenal ecosystems. Since I was responsible for coordinating fieldwork for the park's coral team, planning and preparing for the arrival of SCTLD was squarely within my jurisdiction. At that time, the disease extended up and down nearly the whole length of the Florida Reef. At its closest proximity to the park, the disease was

reported just twenty nautical miles away, near the western edge of the Marquesas island chain. It was inevitable that SCTLD would reach us. Oceanographic models predicted it would arrive at the park's boundaries in March 2021, but we were ready long before then.

We had written the *SCTLD Response Plan*, an extensive and comprehensive document relating all the most relevant research to date and detailing our subsequent short-term response and long-term management strategies for dealing with the oncoming disease.[8] Our plan was run through the bureaucratic tunnel and checked and double-checked by disease experts. We set it in motion, starting with routine reconnaissance surveys, searching every nook and cranny of the park's one-hundred-square-mile waters for the first sign of sickness.

We found it on May 29, 2021, a day I will not soon forget. As I said later in an interview with the *Keys Weekly*, "When we found the first colony . . . with SCTLD, the stark, white lesions of disease, which expose patches of the coral animal's bare skeleton, seemed to glare back at us. SCTLD is distressing to observe, so I felt motivated to do everything possible for that colony."[9]

From then on, we began treating infected corals with an antibiotic paste, a mixture of amoxicillin and Base2B (a special cocoa butter–based formula, created specifically for treating the disease), which was the most effective treatment available. Each day, we mixed the antibiotic treatment by hand or using a KitchenAid mixer, packed it into caulk tubes, and placed the loaded tubes in an icy cooler. Suited up and ready for a series of long dives, with chilled treatment tubes loaded into caulk guns strapped to our hips, our dive team looked partly like sea monsters and partly like strangely outfitted superheroes.

Folks started calling me "the coral doctor." At first, I was proud of the title. (Hubris is perhaps the most rampant vice among

scientists.) But as days of diving melded into years, I began to see myself and the work I was doing differently. I was a bird-masked medieval witch doctor, holding a fistful of rose petals under the nose of a bubonic patient, hoping it was a working cure. The dive team joked about being in the business of "saving corals," but as the disease outpaced our efforts, I was humbled by the fact that I could no sooner save a coral's life than I could my own. I was no savior. I was just a marine biologist, trying my best to keep my head underwater (and figuratively above water), while often observing the fading turn from life into death. If I was a doctor, I was working in hospice care.

News articles mostly tell people what they want to hear. My story is of what I saw, from before the disease arrived to the aftermath of its full staying power, becoming endemic in the park. I can speak with the quiet confidence of field experience, studied knowledge, and faith-based perspective that which time will tell. Will the corals make it? Will we scientists?

The Windjammer didn't make it. For months, it had weathered the seasons of SCTLD with hardly a sign of sickness. Then all at once, as if lit with fire from within, coral faces melted off their skeleton. There was more disease than live tissue, and then there was almost no tissue at all. The profound environmental heritage of the site was reduced to a mere handful of surviving colonies within just a few weeks.

The jewellike corals became stone. The damsels and jacks swam aimlessly around the wreck, looking confused and betrayed, as if their neighborhood had been consumed in a fire. The goliath grouper was nowhere to be seen, vanished into the mist. I knew

it was only a matter of time before the ecological succession of musical chairs would begin, with organisms competing for niches and migrating to new places—some far from their former community. Perhaps the process had already begun, for certainly the music had stopped.

Thank goodness, Porky was still there. He looked puckered and depressed, waving me over with a flimsy fin. I followed, relieved to see my old friend. His liquid-looking eyes bulged with emotion, gazing in the direction of home. The two enormous brain corals that had built his house were dullish gray with the encroachment of colonizing microalgae. The corals were long dead, and Porky was saying goodbye.

Consumed in a tremor of emotion, I placed my hand on one of the skeletons to steady myself. It was solid and lifeless. I blinked in disbelief, then sobbed into my mask until I couldn't see. *I'm sorry, Porky.*

It was the last time I ever saw that little fish. When our team surfaced from the dive, we were pink-faced and silent. The saltwater droplets around our eyes were not of the sea.

Watching the violent necrotic disintegration of coral colonies I had long loved, I found myself in the front-row seat of a collapsing ecosystem. Vibrant, colorful, and diverse sites were completely transformed into graveyards, filled with white ghosts before fading to heaps of algae-covered stone and rubble. My love for corals cost me, just as C. S. Lewis predicted.

> There is no safe investment. To love at all is to be vulnerable. Love anything, and your heart will certainly

> be wrung and possibly be broken. If you want to make sure of keeping it intact, you must give your heart to no one, not even to an animal. . . . If a man is not uncalculating towards the earthly beloveds whom he has seen, he is none the more likely to be so towards God whom he has not. We shall draw nearer to God, not by trying to avoid the sufferings inherent in all loves, but by accepting them and offering them to Him; throwing away all defensive armour. If our hearts need to be broken, and if He chooses this as the way in which they should break, so be it.[10]

I had finally been given the opportunity to make a difference for corals, only to have them taken from me. I thought my purpose for being a coral biologist was to win the fight for creatures I loved, but I found instead it was my destiny to lovingly help them say goodbye. If I could best love corals by having my heart broken, I would stay alongside them and offer what help I could as they died. If I could best love God's creation by serving it in grief, I would stay with the trouble, weeping and praising the Creator as I went.

The corals themselves convicted me in my complaints. They suffered graciously. They praised their Creator unceasingly. They lived out the entirety of their days purposefully. It was as if, through the suffering leading unto death, they achieved entire sanctification. As environmentalist John Muir once wrote of a suffering dog that accompanied him on a glacial voyage, "there is no estimating the wit and wisdom concealed and latent in our lower fellow mortals until made manifest by profound experiences; for it is through suffering that dogs as well as saints are developed and made perfect."[11]

We grieve the pain, suffering, and death of this present world, the land of the living. And not only us but the world itself grieves, languishes, groans. "We know that all creation has been groaning as in the pains of childbirth right up to the present time" (Romans 8:22). The simile of childbirth is used to describe the labor of all creation, which connotes the Genesis curse in the Garden of Eden, first experienced by Eve and Adam (Genesis 3:16-19, NIV). For Eve, the "pains in childbearing" (labor) were increased; for Adam, it was "through painful toil" (labor) that the earth would produce food for him. The processes of bringing life into the world, by childbearing and cultivating the earth, became marked with pain. Because of humankind's decision to sin against God, all of creation has experienced hard labor as a consequence.

Labor in either form—childbirth or hard physical toil—is tremendously painful. It is in this arduous, suffering state that the consequences of creation's curse occur. However, Christianity does not by any means condone suffering as a fact of life or necessary evil. In his sermon "Christian Hope and Suffering," Timothy Keller references the philosophical work of Dr. Marilyn McCord Adams, who explains how Christianity treats suffering differently from all other philosophies. "The Stoics said accept suffering. The Epicureans said avoid suffering. The aesthetics and the masochists said embrace suffering, for its own sake. But the gospel does not accept suffering. It does not avoid suffering. It does not embrace suffering. It engulfs suffering."[12] Christianity offers a perspective of past, present, and future reality that cannot be achieved by any other philosophy because the Christian gospel contains a promised blessing that overwrites, usurps, and transcends all present pain.

This blessing means that, as childbearing labor results in a

newborn baby and overwhelming joy, and as farming labor produces a fruitful harvest and deliciously satisfying food, all earthly labor—whether the groanings of creation or suffering imposed by our vocational work—is never in vain. And labor is not merely an end in itself. Paul's writings to the church in Rome explain the ultimate reason for our suffering. "Now if we are children [of God], then we are heirs—heirs of God and co-heirs with Christ, if indeed we share in his sufferings in order that we may also share in his glory" (Romans 8:17, NIV). This is the reason: If we share in his sufferings, we will share in his glory. For those who know and follow Jesus, this glory is far from a consolation prize; it is a promise. As Keller says, "If the Christian hope is not just a compensation for what we've lost, but a restoration of the world and the life we've always wanted, that changes everything with regard to suffering."[13]

By suffering now as Jesus did during his human life and death, we will also share in his glory, his resurrection and life after death. No greater blessing can be fathomed than to be a child of God and coheir with Jesus, or as Paul states, "What we suffer now is nothing compared to the glory he will reveal to us later" (Romans 8:18). We can consider how we will look back on our present adversity once God restores his creation.

> The new heavens and new earth will make every horrible thing you've ever experienced nothing but a nightmare. . . . And as a nightmare, [it] will do nothing but infinitely, correspondingly increase your future joy in glory in a way that it wouldn't have been increased if you'd never suffered it. And that is the ultimate defeat of evil . . . to say that evil will, in the end, be the servant of your joy. . . . Our momentary affliction achieves an eternal weight of glory beyond all comparison.[14]

Amazingly, this blessing awaits not just humans but all of creation! Every being groans for the eventual blessing through which everything will be restored and made new.[15] All creation labors alongside the children of God, eagerly awaiting "the redemption of our bodies" (Romans 8:23, NIV). For as through Adam the earth was cursed, so through Jesus the earth will be blessed.[16]

> All creation is waiting eagerly for that future day when God will reveal who his children really are. Against its will, all creation was subjected to God's curse. But with eager hope, the creation looks forward to the day when it will join God's children in glorious freedom from death and decay.
>
> ROMANS 8:19-21

Creation labors in expectation of its rebirth, a new life made possible through Jesus, a life void of suffering and death and wholly filled with freedom and glory.

For those who have received God's salvation and have thereby been brought into the freedom of his adopted children, our purpose for laboring is rewritten. "Always give yourselves fully to the work of the Lord, because you know that your labor in the Lord is not in vain" (1 Corinthians 15:58, NIV). We are called to live out our ongoing labor until the day of complete restoration. Through Jesus, God gives labor meaning as a purposeful movement on behalf of the Kingdom of Heaven, even from within the land of the living.

"The land of the living" is a phrase repeated throughout the Bible. In the New International Version, it appears in five different books:

Job, Psalms, Isaiah, Jeremiah, and Ezekiel. The phrase is used to distinguish the present state and status of the created, fallen world from that of the afterlife. For example, "He will uproot you from the land of the living" (Psalm 52:5, NIV) and "I said, 'I will not again see the LORD himself in the land of the living; no longer will I look on my fellow man, or be with those who now dwell in this world'" (Isaiah 38:11, NIV). I believe this same phrase is the most fitting description of where we now find ourselves—isolated to a land where living means suffering that leads toward inevitable death. All creation has been exiled here.

We cry out with longing for a world in which we do not yet find ourselves. We live waiting for the fulfillment of a promise, groaning to be set free from the consequences of sin. It is in this chaotic jumble of beauty and terror—seeing more so every day the reality of our world as broken, fragile, and dying—that we find God.

God's Word reminds us of our exiled existence and future-awaiting hope, or as Rainer Maria Rilke put it: "Nearby is the country they call life."[17] The true country, where we were meant to live, is called the Kingdom of Heaven. We will be there someday. But for now, we are still here.

My heart cries out for something better—for us, for the land of the living in which we roam. To watch ecosystems shipwrecked by the outcomes of human sin and our fallen world—to see the immediate effects of death transforming thousands of strong animals, vibrant with life and pulsing with song, into silent skeletons, brittle as dust—this is our curse. And yet this is also our calling, for we are here to do more than merely watch.

We move through suffering into the pursuit of deeper meanings only God can create. He calls us to keep living, grieving, suffering. To love as wholly and irrevocably as he does. To steward

and protect. Yes, we weep. We will weep yet more. The other day, from my living room window, I spotted a cardinal fallen lifeless to the ground. God saw it long before I did, for "are not two sparrows sold for a penny? Yet not one of them will fall to the ground apart from the will of your Father" (Matthew 10:29, BSB). If our Creator sees the fall of even sparrows and cardinals, then certainly he sees corals. He sees us. And nothing can keep him from us, "for I am convinced that neither death nor life, . . . nor anything else in all creation, will be able to separate us from the love of God that is in Christ Jesus our Lord" (Romans 8:38-39, NIV).

In the land of the living, terror and beauty exist side by side. The terror is a reminder of what happened in Eden and the broken remnants of it left on earth; the beauty is a hint of the promise awaiting final fulfillment in the glorious Garden City, the Kingdom of Heaven.[18] We are here laboring amidst both, marveling at God's character written on creation and saying sorrowful goodbyes when called to do so. Because of who God is, we understand that sorrow mixing into beauty yields creation's groanings, waiting to join the promised Kingdom. I remember the Windjammer and continue diving, continue laboring. I repeat the words of the psalmist, "I am confident I will see the LORD's goodness while I am here in the land of the living" (Psalm 27:13).