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July 7, 2020

Coral Reefs, Climate Change, and Ecological Lament

Chloe Hansum

As a biologist, I dreamed of visiting the Great Barrier Reef in Australia. As an ecosystem that can be seen from space, the Great Barrier Reef is known for its unique beauty and vast size. My aspiration to experience this reef wasn't only to see a natural wonder of the world, but also a dream spurred by fear that this ecosystem would disappear in my lifetime.

Coral reefs are impacted by what scientists call “bleaching events.” When the sea temperature increases beyond what corals are adapted to, the corals become stressed. The term coral bleaching comes from the fact that the corals turn white when the symbiotic algae depart from the coral's tissues. If the bleaching events are severe, or if multiple bleaching events occur, widespread death sweeps over coral reefs as they cannot live without these algae.¹

The increase in ocean temperature is tied to climate change, a result from increased levels of human produced greenhouse gases.² This also puts stress on the coral reefs, causing massive reef bleaching and coral death.³ The Great Barrier Reef has experienced a number of massive bleaching events, with the most recent occurring early 2020. Scientists have projected that under current carbon dioxide levels, the Great Barrier Reef will experience considerable degradation and there are major concerns the ecosystem itself will disappear.⁴

Other human actions have caused degradation to the coral reefs. Pollution has a negative impact on coral reef health and ocean acidification, which is an increase in ocean acidity levels due to high carbon dioxide levels have both negatively impacted the

reefs over the past fifty years. Change in ocean pH threatens many corals and other sea creatures because of an inability to build calcium structures such as shells.

So, when I had the chance to visit the Great Barrier Reef while I studied abroad, I made sure to take advantage of this opportunity. No words can describe the beauty of the Great Barrier Reef; a place where fish and coral dance together in an underwater ballroom. Colors more vibrant than ever imaginable move through the water singing with each flick of a fin. These creatures join together in a song of praise to their Creator. In the quiet of the underwater world, these fish, corals, algae, and other sea creatures bring glory to their Maker through simply doing what they were made to do. This scene brought tears to my snorkel-masked eyes below the water, not only because of these beautiful creatures and ecosystem, but also the knowledge that this ecosystem is facing destruction.

The theme of creation praising its maker is woven throughout Scripture. In Psalm 19 David writes, “The heavens declare the glory of God, and the sky above proclaims his handiwork. Day to day pours out speech and night to night reveals knowledge.” This theme continues in Psalm 66, “all the earth worships you and sings praise to you; they sing praises to your name.” Even in during the triumphal entry in Luke 19 when the Pharisees tell Jesus to rebuke his disciples, Jesus responds in saying “I tell you, if these were silent, the very stones would cry out.” Countless other passages reveal the created order praising God.

But, every time I see another news article about another bleaching event, I lament this ecological degradation. I cry out on behalf of creation that our actions are preventing flourishing and praise. Our apathy and consumption are hurting creation. We lament out of a longing and desire for the world to be as God intended. As Christians, we long for the day when Christ will come to make all things new.

Our lament can be a form of worshiping God and allows us to identify with Christ. We cry out to God on behalf of creation because Christ in his suffering cried out “My God, my God, why have you forsaken me?”⁵

But, lament doesn't cause us to be idle in our actions, but rather quite the contrary. Ecological lament drives us into action; into caring for the created order. Lament pushes us to take on the role as co-heirs with Christ, working to bring renewal and restoration to the brokenness our human actions has caused. Lament should cause us to reduce our carbon footprints, conserve ecosystems across the world, and elect leaders who aim for carbon reduction.

We need to seriously ask ourselves Do we lament ecological degradation? And if so, we further ask, what can I do to enhance creation's song? How can I better care for all creatures great and small?⁶

FOOTNOTES

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3. Gattuso, Jean-Pierre, et al. "Coral Reefs." Intergovernmental Panel on Climate Change, Oct. 2018 https://www.ipcc.ch/site/assets/uploads/2018/02/WGIAR5-CCboxes_FINAL.pdf
4. Wolff, Nicholas H., et al. "Vulnerability of the Great Barrier Reef to Climate Change and Local Pressures." Wiley Online Library, John Wiley & Sons, Ltd, 8 Feb. 2018 <https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.14043>.
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6. From the traditional hymn All Things Bright and Beautiful by Cecil Frances Alexander