

Article



Oscar Gonzalez



Dario Di Luca

Viral Diseases and the Neglected Commandment of Creation Care

Oscar Gonzalez and Dario Di Luca

Humans are called to rule over creation (Gen. 1:27) but not in an irresponsible way. We should treat creation, as we read in Genesis 2:15, by caring for it. That was the requirement from God for humanity. We can define creation care as nature conservation. However, we should acknowledge that we have been neglecting our role as stewards of creation. There is deforestation, species extinction, pollution, and other human activities that cause suffering not only for plants and animals, but also for people. Mismanagement of nature can cause spillover of disease. In wildlife, agents of disease are common, but they are somehow under control when there are many hosts. Scientists recognize today that pathogens and parasites have a role in the structure of ecosystems. By causing deforestation and removing animals from their natural habitats, we are increasing the possibility of zoonotic diseases that may cause epidemics and pandemics. This article will relate the origin of viral diseases, such as COVID-19, to a failure of proper nature management and provide examples of viral diseases resulting from such mismanagement.

Keywords: disease ecology, zoonosis, creation care, pandemics, viral diseases, pathogens, nature destruction

Destruction of Nature and Disease Ecology

Disease and nature destruction are linked if humans subdue the earth without caring for it. When people change the environment abruptly, the original ecosystems that were there might not be ready to face the new diseases that come.¹ Pathogens cause infections, and many of these agents of disease live in natural ecosystems. The new diseases caused by these pathogens can produce an epidemic

for plants, animals, and people, establishing a relationship between disease and ecology. Habitat and biodiversity loss are increasing diseases in wildlife,² and the homogenization of habitats by human activities leads to easier transmission of pathogens and epidemics.

Human land-use change causes habitat loss (fragmentation), mainly through the reduction of tree cover (deforestation). This contributes to the spreading of diseases and the occurrence of epidemics in forest communities. Deforestation increases the possibility of physical contact between humans and animals, which can result in the transmission of infectious diseases from parasites and pathogens of wildlife.³ Land-use change, such as deforestation, is the leading driver for emerging “zoonoses,” infectious diseases that have jumped from a nonhuman animal to humans.⁴

Oscar Gonzalez (PhD, University of Florida) is a researcher in ornithology, and a former associate professor of biology, zoology, and ecology at the Department of Natural Sciences in Emmanuel College, GA. He focuses his research on birds from Peru and promotes conservation advocating creation care.

Dario Di Luca (ScD, University of Ferrara) is a full professor of microbiology at the Department of Medical Sciences, University of Ferrara, Italy. He has studied the molecular biology and pathogenesis of viral infections (mainly human herpesviruses and papillomaviruses), and is currently studying innate responses to viral infection.

Habitat loss will lead to the reduction of species richness, and the pathogens would be highly prevalent if there are few host species and few individuals.⁵ This means that a low biodiversity index is an invitation to disease in wildlife. Several epidemics have originated in the wild and affected crops, livestock, and people. The higher the biological diversity, the lesser the disease's prevalence is in the ecosystem.⁶ If there are more hosts in the ecosystem, the whole ecosystem's diseases are fewer.⁷ Knowing this fact, we should maintain the integrity of ecosystems by avoiding species loss.

Parasites and Pathogens in the Ecosystems

Diseases are mainly carried by pathogens and parasites, which formerly were relegated as anomalies in nature but now can be considered part of the food web in all ecosystems. Some scientists argue that the food web is incomplete without them because they could dominate food web links.⁸ Today parasites could be placed at the top of the food pyramid because they can produce more biomass than their hosts. Parasitism paradoxically may increase biodiversity because some parasites are "good," protecting individuals against more pathogenic forms.⁹ Parasites may modify every kind of interaction in an ecosystem. We should consider that natural diseases in an ecosystem are part of the process, not just anomalies.¹⁰ Life cycles of parasites and their dynamics, normal vectors of disease, affect wildlife's community structure and people.¹¹

All animals, plants, and people have symbionts inside their bodies, which could be parasites or potential pathogens. We should be familiar with the human microbiota.¹² Microbes' standard load in plants and animals is fundamental to resisting pathogens from outside their geographical scope. It has been proposed that wildlife outbreaks, such as the amphibian's chytridiomycosis (a disease that is killing frogs worldwide), are the result of change in microbial communities and a new disease dynamic.¹³ Pathogens and parasites have a function in nature. When we disrupt their cycles with deforestation or wildlife traffic, we are more likely to become contaminated by zoonosis.

Zoonotic Viral Diseases

Recent years have witnessed several outbreaks and pandemics in humans as a result of spillover. Spillover occurs when a pathogen (that may or may not cause disease in the natural host) comes in contact with a new host population and acquires the ability to replicate in the new host. Examples of recent spillovers include several Coronaviruses (SARS in 2003, MERS in 2012, SARS-CoV-2, the agent of COVID-19 in 2019), Nipah virus in 1999, Ebola virus in 1976 with several epidemics after that, Sin Nombre virus in 1993, several human outbreaks of highly pathogenic avian influenza, hantavirus, Zika, Ebola, HIV, and West Nile virus.¹⁴ Several of these outbreaks are viral diseases that came about due to environmental changes caused by human activities.¹⁵

Sometimes spillovers occur as a direct result of human behavior, as in the case of monkeypox in 2003. Despite its name, monkeypox is a disease caused by a rodent poxvirus that occasionally infects humans in different parts of Africa.¹⁶ In 2013, 47 cases of human monkeypox were reported in different parts of the United States. It was determined that the virus was introduced through a shipment of wild animals from West Africa, including African giant rats, tree squirrels, and different species of mice. The wild animals were later sold as pets. The outbreak was easily contained because there was no human transmission, but it highlights the dangers of introducing wild animals into our human environment.¹⁷ An unmanaged and uncontrolled wild animal market is a melting pot of zoonotic viruses.

Nipah virus represents another example of spillover due to human activities. Nipah virus is a member of the *Paramyxoviridae* family. The virus was first isolated in 1999, when over 250 infectious encephalitis cases, with over 100 deaths, occurred in Malaysia and surrounding areas. The disease was transmitted to humans by pigs, who became infected by eating fruit contaminated by bat saliva or urine. This first outbreak was successfully contained by culling one million pigs.¹⁸ However, since then, several small outbreaks have occurred in Bangladesh and India, where this disease is linked to the consumption of fruit products, such as date palm sap collected

Article

Viral Diseases and the Neglected Commandment of Creation Care

overnight in open containers that get contaminated with urine or saliva from infected bats.¹⁹ In this instance, safer agricultural procedures, such as avoiding livestock and agriculture in the proximity of wildlife, can eliminate spillover risk.

Machupo virus is a member of the *Arenaviridae* and is the etiological agent of Bolivian hemorrhagic fever. Machupo virus infects asymptomatic rodents and is shed with urine. The first recorded occurrence of the disease in humans dates to 1962, in the rural village of San Joaquín (Bolivia). Over 600 people were infected, and the lethality rate was close to 20%. The outbreak was associated with a decrease in the domestic cat population and an increase in rodent numbers that occurred after the region had a high incidence of malaria, and extensive DDT use was carried out. Cat mortality was associated with exposure to toxic doses of DDT through the alimentary chain and resulted in an uncontrolled burst of mice. The outbreak disappeared when rodents were controlled by extensive trapping, and the cat population was re-established.²⁰ The terrible legacy of DDT as a toxic agent for the ecosystems affected human health with the emergence of the Machupo virus.

Rift Valley fever (RVF) is a viral zoonosis caused by a Phlebovirus, affecting primarily animals, but it can also infect humans. The virus is transmitted by mosquito bites. In 1987, a massive outbreak of RVF, with about 200 human deaths, occurred in the areas surrounding the Senegal River after the Diama dam was built.²¹ Similarly, an outbreak of RVF occurred in Egypt following the completion of the Aswan dam.²² Dams cause ecological disasters by altering the water cycle and modifying the landscape in the places where they are built.²³ In these instances, creating artificial water basins and irrigation for agricultural purposes has increased the habitat favorable for mosquito breeding, consequently increasing the risk of RVF transmission.²⁴ These examples of RVF outbreaks in Africa are tied to nature destruction.

Climate change is also an essential factor for emerging viral diseases. In fact, several arboviral infections are transmitted explicitly by tropical mosquitoes. Increasing temperatures result in extended habitats

for tropical mosquitos, and therefore also for the viruses they carry. For example, dengue fever is a disease transmitted by female mosquitoes, mainly of the species *Aedes aegypti* and, to a lesser extent, *Ae. albopictus*. These mosquitoes are also vectors of chikungunya, yellow fever, and Zika viruses. Severe dengue is a leading cause of severe illness and death. According to the World Health Organization, before 1970, only nine countries had experienced severe dengue fever epidemics, but now the disease is endemic in over 100 countries.²⁵ About half of the world's population is now at risk, with an estimated 100 million symptomatic infections each year.²⁶ Furthermore, autochthonous transmission of arboviral disease is starting to occur also in temperate zones,²⁷ in association with heavy rains and temperatures permissive for mosquito breeding.²⁸ Our negligent stewardship of the climate moves viral diseases, once restricted to a tropical area, to temperate areas where previously people were not exposed.

Contention of Pandemics

We can trace terrible epidemics and historic pandemics as different cases of zoonosis. The zoonotic origin of this new Coronavirus is strongly supported by genetic analysis, showing close genomic homology to several bat and pangolin viruses.²⁹ As we write, evidences do not support a single direct spillover from a still unidentified animal source to humans (the horseshoe bat *Rhinolophus affinis* is a potential candidate), but they are consistent with multiple spillover events between different animal species, facilitated by typical meat-markets selling live animals.³⁰ Regardless, bats, pangolins, and other forest animals should have lived their lives freely in their undisturbed habitats. However, people destroyed their forests and removed the wildlife to bring them into human markets with insalubrious conditions. In those markets, wild animals interact in a way that is not natural, exchanging saliva, blood, and pathogens inside crowded cages. Here zoonosis occurs, and the conditions provide a very likely scenario for the origin of an epidemic.³¹ This is a scenario of mismanagement of creation with a lack of respect for other creatures and for the integrity of ecosystems, which are also part of God's creation. Both hypotheses

(lab-leakage and animal markets) indicate the importance of human contribution not only in spreading and failing to control the pandemic, but also, possibly, in its origin.

This pandemic caused by coronavirus is something that could be interpreted as one of the “groans of creation”:


We know that the whole creation has been groaning as in the pains of childbirth right up to the present time. (Romans 8:22)

This Bible verse is used mainly to describe soteriological or eschatological scenarios. But we can also see that human sin is still affecting creation in a way that natural decay is exacerbated. In our lust for nature’s products, creation groans, and as a consequence, we have this pandemic. With our irresponsible behavior, we are aggravating nature’s groaning.³² The creation has been in pain because of our mismanagement; it is time that we exercise adequate stewardship and bring healing in this broken world.³³

Proposed Solution: Creation Care

Humanity has survived previous pandemics in the past. Christians have taken part in the solution by caring for the needy. We can still do the same, and this is the time for Christians to heed the authorities when they promote vaccination and impose quarantines, mask mandates, and meeting restrictions because those are policies that offer some protection.³⁴ One of these policies should also involve nature conservation to prevent zoonosis.³⁵ This is not the time for Christians to spread misinformation and conspiracy theories about the pandemic.³⁶ These lies shame our testimony and do not provide a solution to those who are suffering. We have the opportunity to apply science and faith to solve a health crisis. Neither is this the time to blame God for the zoonotic diseases that caused so much suffering: we, of our free will, disturbed nature’s pathogens that originated those diseases.

We should also consider the neglected commandment of creation care more seriously by becoming agents of the Lord’s kingdom to conserve the integrity of the ecosystems that were entrusted to us.³⁷

This call to action is not equivalent to becoming political activists for a specific party: we care for creation because it is what God expects from us. We should conserve the forests and the animals that live there; in this way, we prevent the spillover of diseases from wildlife to humans.³⁸ We should advocate for the combat of the illicit wildlife trade that puts people at risk of zoonosis.³⁹ There could be more viruses or pathogens that would mutate quickly and affect us, even worse than the SARS-CoV-2 virus. The conservation of nature is not just for the sake of animals, plants, or romantic conservationists. It is a way to love God and our neighbor. 

Acknowledgments

We are grateful to the editorial team and to the anonymous reviewers who helped to review this paper.

Notes

¹Sonia Altizer, Drew Harvell, and Elizabeth Friedle, “Rapid Evolutionary Dynamics and Disease Threats to Biodiversity,” *Trends in Ecology & Evolution* 18, no. 11 (2003): 589–96, <https://doi.org/10.1016/j.tree.2003.08.013>.

²A seminal publication on disease ecology elaborated by scholars of different backgrounds which is valuable for policy makers is Montira J. Pongsiri et al., “Biodiversity Loss Affects Global Disease,” *Bioscience* 59, no. 11 (2009): 945–54, <https://doi.org/10.1525/bio.2009.59.11.6>.

³Laura S. P. Bloomfield, Tyler L. McIntosh, and Eric F. Lambin, “Habitat Fragmentation, Livelihood Behaviors, and Contact between People and Nonhuman Primates in Africa,” *Landscape Ecology* 35 (2020): 985–1000, <https://doi.org/10.1007/s10980-020-00995-w>.

⁴Elizabeth H. Loh et al., “Targeting Transmission Pathways for Emerging Zoonotic Disease Surveillance and Control,” *Vector-Borne Zoonotic Diseases* 15, no. 7 (2015): 432–37, <https://doi.org/10.1089/vbz.2013.1563>.

⁵Andrea Swei et al., “Effects of an Invasive Forest Pathogen on Abundance of Ticks and Their Vertebrate Hosts in a California Lyme Disease Focus,” *Oecologia* 166, no. 1 (2011): 91–100, <https://pubmed.ncbi.nlm.nih.gov/20941513/>.

⁶F. Keesing, R. D. Holt, and R. S. Ostfeld, “Effects of Species Diversity on Disease Risk,” *Ecology Letters* 9, no. 4 (2006): 485–98, <https://doi.org/10.1111/j.1461-0248.2006.00885.x>.

⁷A book that presents a “marriage of ecology and disease biology” is R. S. Ostfeld, F. Keesing, and V. T. Eviner, eds., *Infectious Disease Ecology: The Effects of Ecosystems on Disease and of Disease on Ecosystems* (Princeton, NJ: Princeton University Press, 2008). See also Kathleen LoGiudice et al., “The Ecology of Infectious Disease: Effects of Host Diversity and Community Composition on Lyme Disease Risk,” *Proceedings of the National Academy of Sciences of the United States of America* 100, no. 2 (2003): 567–71, <https://doi.org/10.1073/pnas.0233733100>.

⁸Kevin D. Lafferty, Andrew P. Dobson, and Armand M. Kuris, “Parasites Dominate Food Web Links,” *Proceedings of the National Academy of Sciences, USA* 103, no. 30 (2006): 11211–16, <https://doi.org/10.1073/pnas.0604755103>.

Article

Viral Diseases and the Neglected Commandment of Creation Care

- ⁹Daniel L. Preston and Pieter T. J. Johnson, "Ecological Consequences of Parasitism," *Nature Education Knowledge* 3, no. 10 (2010): 47, <https://www.nature.com/scitable/knowledge/library/ecological-consequences-of-parasitism-13255694/>.
- ¹⁰Lafferty, Dobson, and Kuris, "Parasites Dominate Food Web Links"; and Preston and Johnson, "Ecological Consequences of Parasitism."
- ¹¹Peter W. Price et al., "Parasite Mediation in Ecological Interactions," *Annual Review of Ecology and Systematics* 17 (1986): 487–505, <https://www.annualreviews.org/doi/abs/10.1146/annurev.es.17.110186.002415?journalCode=ecolsys.1>; and Lo Guidice et al., "The Ecology of Infectious Disease."
- ¹²A pastor and a biologist did a wonderful essay on the biology and theology of the human microbiota: Michael Kunnen and Clayton D. Carlson, "Deeply Connected to God's Good World, the Human Microbiome," *Christian Scholar's Review* 46, no. 2 (2017): 113–26.
- ¹³Lisa K. Belden and Reid N. Harris, "Infectious Diseases in Wildlife: The Community Ecology Context," *Frontiers in Ecology and the Environment* 5, no. 10 (2007): 533–39, <https://doi.org/10.1890/060122>.
- ¹⁴The book of David Quammen, *Spillover: Animal Infections and the Next Human Pandemic* (New York: W. W. Norton, 2012) is a source that predicted a pandemic situation. The unsanitary consumption of chimpanzee meat in Africa might have led to the appearance of HIV. See Beatrice H. Hahn et al., "AIDS as a Zoonosis: Scientific and Public Health Implications," *Science* 287, no. 5453 (2000): 607–14, <https://doi.org/10.1126/science.287.5453.607>.
- ¹⁵A good reference to understand zoonotic infections and their relationship with human impact on nature is "Covid 19: Urgent Call to Protect People and Nature," WWF (World Wide Fund for Nature), June 17, 2020, <https://www.worldwildlife.org/publications/covid19-urgent-call-to-protect-people-and-nature>.
- ¹⁶Katy Brown and Peter A. Leggat, "Human Monkeypox: Current State of Knowledge and Implications for the Future," *Tropical Medicine Infectious Disease* 1, no. 1 (2016): 1–13, <https://doi.org/10.3390/tropicalmed1010008>.
- ¹⁷"2003 United States Outbreak of Monkeypox," Centers for Disease Control and Prevention, last reviewed September 28, 2018, accessed October 31, 2020, <https://www.cdc.gov/poxvirus/monkeypox/outbreak.html>.
- ¹⁸"Nipah Virus," Centers for Disease Control and Prevention, last reviewed October 30, 2020, accessed October 31, 2020, <https://www.cdc.gov/vhf/nipah/index.html>.
- ¹⁹Stephen P. Luby and Emily S. Gurley, "Epidemiology of Henipavirus Disease in Humans," *Current Topics in Microbiology and Immunology* 359 (2012): 25–40, https://doi.org/10.1007/82_2012_207.
- ²⁰Michael Patterson, Ashley Grant, and Slobodan Paessler, "Epidemiology and Pathogenesis of Bolivian Hemorrhagic Fever," *Current Opinion in Virology* 5 (2014): 82–90, <https://doi.org/10.1016/j.coviro.2014.02.007>.
- ²¹J. P. Digoutte and C. J. Peters, "General Aspects of the 1987 Rift Valley Fever Epidemic in Mauritania," *Research in Virology* 140, no. 1 (1989): 27–30, <https://www.sciencedirect.com/science/article/abs/pii/S0923251689800810?via%3Dihub>.
- ²²Osama Ahmed Hassan et al., "The 2007 Rift Valley Fever Outbreak in Sudan," *PLoS Neglected Tropical Diseases* 5, no. 9 (2011): e1229, <https://doi.org/10.1371/journal.pntd.0001229>.
- ²³Haipeng Wu et al., "Effects of Dam Construction on Biodiversity: A Review," *Journal of Cleaner Production* 221, no. 1 (2019): 480–89, <https://www.sciencedirect.com/science/article/abs/pii/S0959652619306845?via%3Dihub>.
- ²⁴Jocelyn Thonnon et al., "Rift Valley Fever Surveillance in the Lower Senegal River Basin: Update 10 Years after the Epidemic," *Tropical Medicine and International Health* 4, no. 8 (2002): 580–85, <https://doi.org/10.1046/j.1365-3156.1999.00437.x>.
- ²⁵"Dengue and Severe Dengue," World Health Organization (WHO), May 19, 2021, accessed July 15, 2021, <https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue>.
- ²⁶Jane P. Messina et al., "The Current and Future Global Distribution and Population at Risk of Dengue," *Nature Microbiology* 4 (2019): 1508–15, <https://doi.org/10.1038/s41564-019-0476-8>.
- ²⁷Frédéric Jourdain et al., "From Importation to Autochthonous Transmission: Drivers of Chikungunya and Dengue Emergence in a Temperate Area," *PLoS Neglected Tropical Diseases* 14, no. 5 (2020): e0008320, <https://doi.org/10.1371/journal.pntd.0008320>.
- ²⁸Mattia Manica et al., "Spatial and Temporal Hot Spots of *Aedes albopictus* Abundance inside and outside a South European Metropolitan Area," *PLoS Neglected Tropical Diseases* 10, no. 6 (2016): e0004758, <https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0004758>.
- ²⁹Maciej F. Boni et al., "Evolutionary Origins of the SARS-CoV-2 Sarbecovirus Lineage Responsible for the COVID-19 Pandemic," *Nature Microbiology* 5 (2020): 1408–17, <https://doi.org/10.1038/s41564-020-0771-4>; Tommy Tsan-Yuk Lam et al., "Identifying SARS-CoV-2-Related Coronaviruses in Malaysian Pangolins," *Nature* 583 (2020): 282–85, <https://doi.org/10.1038/s41586-020-2169-0>; Dimitrios Paraskevis et al., "Full-Genome Evolutionary Analysis of the Novel Corona Virus (2019-nCoV) Rejects the Hypothesis of Emergence as a Result of a Recent Recombination Event," *Infection, Genetics and Evolution* 79 (2020): 104212, <https://doi.org/10.1016/j.meegid.2020.104212>; and Tao Zhang, Qunfu Wu, and Zhigang Zhang, "Probable Pangolin Origin of SARS-CoV-2 Associated with the COVID-19 Outbreak," *Current Biology* 30, no. 7 (2020): 1346–51, <https://doi.org/10.1016/j.cub.2020.03.022>.
- ³⁰Spyros Lytras et al., "The Animal Origin of SARS-CoV-2," *Science* 373, no. 6558 (2021): 968–70, <https://www.science.org/doi/10.1126/science.abh0117>.
- ³¹Amaël Borzée et al., "COVID-19 Highlights the Need for More Effective Wildlife Trade Legislation," *Trends in Ecology & Evolution* 35, no. 12 (2020): 1052–55, <https://doi.org/10.1016/j.tree.2020.10.001>.
- ³²"Creation" in Romans 8:22 refers to nature, not humans. See Douglas J. Moo, "Nature in the New Creation: New Testament Eschatology and the Environment," *Journal of the Evangelical Theological Society* 49, no. 3 (2006): 449–88, https://www.etsjets.org/files/JETS-PDFs/49/49-3/JETS_49-3_449-488_Moo.pdf. On relating the groaning of creation with the pandemic, see Oscar Gonzalez, "The COVID-19 Pandemics and the Groaning of Creation," *God and Nature* (Summer 2020), <https://godandnature.asa3.org/gonzalez-pandemic-and-groaning-of-creation.html>.
- ³³Daniel L. Brunner, Jennifer L. Butler, and A. J. Swoboda, *Introducing Evangelical Ecotheology* (Grand Rapids, MI: Baker Academic, 2014), chapter 3, "The Voice of Creation: The Grandeur and the Groaning of the Earth," 35–66;

and William Horst, "Creation's Slavery to (Human) Corruption: A Moral Interpretation of Romans 8:20–22," *Perspectives on Science and Christian Faith* 73, no. 2 (2021): 79–90.

³⁴The response of the leadership of New Zealand during COVID-19 is a good example of pandemic management. See D. Gareth Jones, "A Christian Perspective on New Zealand's Response to COVID-19," *Perspectives on Science and Christian Faith* 73, no. 2 (2021): 67–78.

³⁵Borzée et al., "COVID-19 Highlights the Need for More Effective Wildlife Trade Legislation."

³⁶Deborah Haarsma, Jim Stump, and David Buller, "Beyond 'Plandemic': A Christian Response to Conspiracies," *BioLogos*, May 11, 2020, accessed November 30,

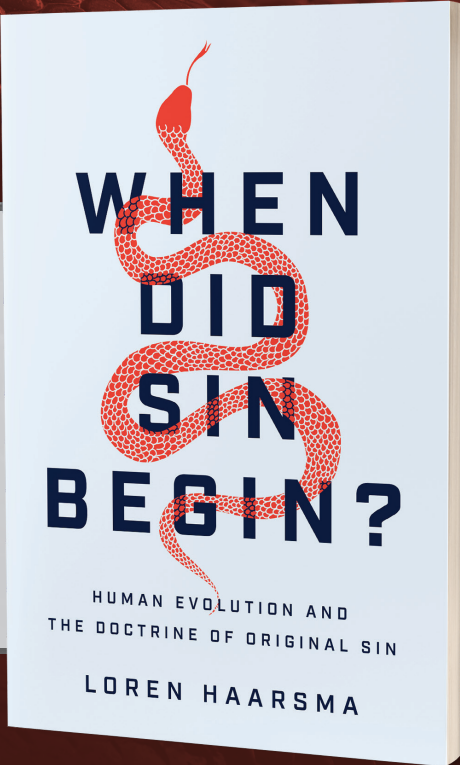
2020, <https://biologos.org/articles/beyond-plandemic-a-christian-response-to-conspiracies>.

³⁷Jonathan A. Moo, "Earth Day at 50: Christians, Creation, and COVID-19," *BioLogos*, April 22, 2020, accessed November 30, 2020, <https://biologos.org/articles/earth-day-at-50-christians-creation-and-covid-19>.

³⁸Felipe S. Campos and Ricardo Lourenço-de-Moraes, "Ecological Fever: The Evolutionary History of Coronavirus in Human-Wildlife Relationships," *Frontiers in Ecology and Evolution* 8 (2020), <https://www.frontiersin.org/articles/10.3389/fevo.2020.575286/full>.

³⁹"Covid 19: Urgent Call to Protect People and Nature."

ASA Members: Submit comments and questions on this article at www.asa3.org→RESOURCES→Forums→PSCF Discussion.



EXPLORING SCIENCE AND FAITH WITH
Baker Academic

"The question of the 'historical Adam' in the light of the teaching of the Bible in dialogue with evolutionary theory is one of the most pressing theological questions facing the church today. I wholeheartedly recommend this book to the church as we think through the question of the relationship between the Bible and science."

—**TREMPER LONGMAN III**,
distinguished scholar and professor emeritus
of biblical studies, Westmont College

LEARN MORE AT BAKERACADEMIC.COM