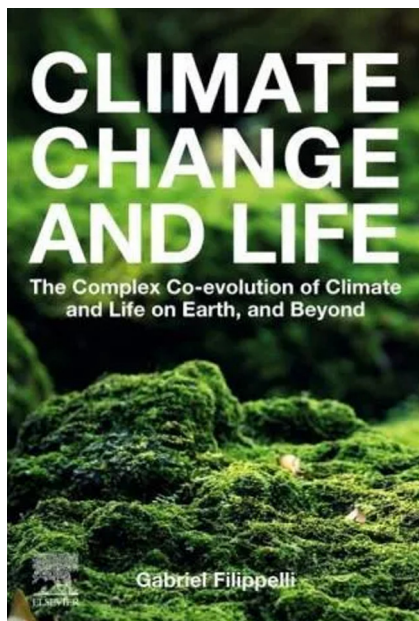


Book reviews

Climate change and life: The complex co-evolution of climate and life on Earth, and beyond, by Gabriel Filippelli, 2022. Elsevier, Amsterdam. 275 pages. Paperback: price \$135.00, ISBN 978-0-12-822568-4.



I constantly search for resources that provide a comprehensive and captivating overview of the interrelationship between the Earth's climate and life on our planet. Gabriel Filippelli's "Climate change and life: The complex co-evolution of climate and life on Earth, and beyond" is a remarkable scholarly book that delves into this intricate relationship. Filippelli expertly interweaves a narrative of Earth's geological and biological history with a critical analysis of modern climate change concerns.

Throughout the book, Filippelli's writing is both academic and engaging. He effectively invites readers to share in his passion for the subject matter. One of the most fascinating chapters in the book is Chapter Two, which explores the role of cyanobacteria in oxygenating Earth's atmosphere. Filippelli's captivating storytelling provides a vivid picture of how these tiny organisms played a significant role in shaping our planet's habitable environment. He explains how cyanobacteria were responsible for

the Great Oxidation Event, leading to the development of complex life forms. The author's detailed analysis of the geological evidence and thoughtful presentation of various theories surrounding this event provides a thorough understanding of the topic.

Chapter Four, focusing on the role of plate tectonics in climate change, is another noteworthy section of the book. Filippelli adeptly explains how the movement of Earth's crustal plates has significantly influenced the distribution of land masses and ocean basins over time. This process, in turn, has influenced the global climate system by altering ocean circulation patterns and atmospheric circulation. The author provides several examples, such as the formation of the Isthmus of Panama and its impact on the global climate system. Filippelli's ability to present complex scientific concepts in an accessible manner allows readers to grasp the significance of these geological phenomena.

In Chapter Eight, Filippelli dives into the mystery surrounding the extinction of the great megafauna of Paleolithic North America. The author examines various hypotheses for their disappearance, including climate change, human predation, and even a potential meteor impact. Filippelli's exploration of the scientific evidence, debates, and challenges surrounding this topic is engaging and thought-provoking. This chapter demonstrates the author's commitment to presenting a balanced view of the complex interactions between climate change and the extinction of these iconic species.

The final chapter of the book, Chapter Nine, addresses the pressing issue of anthropogenic climate change and its impacts on future Earth. Filippelli's sobering analysis of the threats to marine and terrestrial ecosystems, including ocean acidification, loss of polar habitats, and the emergence of new human diseases, is a stark reminder of the challenges we face. However, the author also emphasizes the resilience of Earth's systems, providing a sense of hope and responsibility for the future. This chapter

serves as a call to action, urging readers to consider the importance of mitigating climate change and preserving the intricate ecological web that sustains life on our planet.

One of the most striking aspects of this book is Filippelli's discussion of the human psychology behind climate change denial. The author's insights into the role of confirmation bias and the importance of effective climate communication provide a valuable perspective on this challenging issue. Filippelli's acknowledgement of the uncertainties that remain in climate science, such as the sensitivity of ice melt to temperature increases, further demonstrates his commitment to presenting a balanced and well-rounded view of the subject matter.

The book also excels in its interdisciplinary approach, drawing on fields such as geology, biology, and environmental science to provide a comprehensive understanding of the interplay between climate and life. Filippelli's incorporation of recent research findings and case studies adds depth and relevance to the content, making it a valuable resource for both scholars and laypersons alike.

Filippelli's expert navigation of Earth's geological and biological history, as well as his ability to present complex scientific concepts in an accessible manner, make this book an essential resource for anyone interested in understanding the intricate relationship between climate change and life on our planet. The author's balanced, neutral, and positive evaluation of the content, coupled with his engaging

first-person narrative, results in a captivating and informative reading experience. I found Filippelli's book to be a fascinating exploration of the co-evolution of climate and life on Earth. It has broadened my perspective on the subject and deepened my understanding of the complex relationships between Earth's systems. I particularly appreciated the author's emphasis on the importance of mitigating climate change and preserving the intricate ecological web that sustains life on our planet. This book has inspired me to continue my research and advocacy efforts in the fight against climate change.

In conclusion, "Climate change and life: The complex co-evolution of climate and life on Earth, and beyond" by Gabriel Filippelli is a remarkable and essential read for anyone interested in understanding the history and future of our planet. Filippelli's engaging narrative, thorough analysis, and balanced evaluation of the content make this scholarly book a must-read for both academics and general audiences. As an environmental scientist, I wholeheartedly recommend this book to anyone seeking a comprehensive and captivating exploration of the interrelationship between Earth's climate and life.

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