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Review: Life in the Hothouse: How a Living Planet Survives Climate Change

By Melanie Lenart

Reviewed by Elery Hamilton-Smith
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Lenart, Melanie. *Life in the Hothouse: How a Living Planet Survives Climate Change*. Tucson, AZ: University of Arizona Press, 2010. 236pp. ISBN 9780816527236.US\$22.95, paperback.

This is a fine book. Amongst the plethora of writing on climate change, this one is remarkable for its comprehensiveness, integration and clarity. Although dealing with a very complex topic, its clarity is such that any reasonably well-read would find it both fascinating and informative while most academics would also welcome its clarity.

The author opens with the recognition that Lovelock's Gaia concept provides an appropriate framework for understanding climate change. So her overall strategy is clearly based within the metaphorical process. At the same time her forthright position emerges in describing Descartes' mechanistic philosophy as outdated.

Her own approach is to lead the reader on a conceptual journey in search of a clear and holistic understanding of climate. Her own insights into current scientific research are explained and integrated while traveling through the mindscapes of our world perceived as Gaia. Adopting the searching journey as a research model is still relatively new but has demonstrated its value in dealing with complexity. Those who have adopted it see it as a parallel to using a systematic journey of observation to understand complex geographic landscapes.

The Palaeo-evidence tells us that the world has passed through regular cycles of climate change, even though the periods of change are more or less tumultuous in character in the short term and scientists have often found themselves disagreeing in trying to interpret the meaning of short term changes. But the real evidence tells us that each cycle is a period of slow global warming within which gales, cyclones and hurricanes re-distribute tropical hot air to cooler latitudes, thus controlling the overall global warming. The impacts of these movements are most marked in their migration from the tropics to formerly temperate climatic zones. Thus, the boundaries of cyclonic zones are respectively moving to the North and South.

Lenart draws upon the Gaia metaphor by pointing out that when we experience over-heating, our bodies perspire and we use fans to reduce the impact of the hot atmosphere. In very much the same way, the Gaia world uses cyclones and other storms to move hot air away from the overheated tropics.

Having been very aware of how far we have been able to enrich our own understanding of climate change by the Palaeo-climatic research, I now venture into the future. Lenart (and other climate change scholars) have been cautious in examining the potential impacts upon geomorphic change. Clearly the movement of immense loads of sediments and boulders do lead to significant changes in landscapes. The disappearance of deep ice cover will similarly alter the immense pressures upon rocks and even crustal margins. In turn some of these changes will be a major factor in generation of tsunamis and earthquakes. I believe these phenomena urgently demand systematic assessment with a view to developing effective predictive models to aid planning for geomorphic recovery. Perhaps our long-distance descendents will be able to draw upon such work in planning for management of the next climatic change event.

Further References

Lovelock, J.E. *Gaia: A new look at life on Earth*. New York, NY: Oxford University Press, 1979.

James Lovelock homepage: <http://www.jameslovelock.org/page0.html>

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