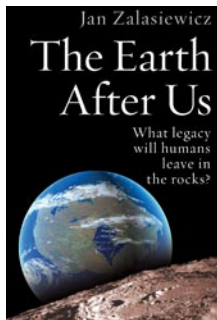


Looking back from the future



THE EARTH AFTER US: WHAT LEGACY WILL HUMANS LEAVE IN THE ROCKS?

by Jan Zalasiewicz

Oxford University Press: 2008. 272 pp. \$34.95/£14.99

If future explorers came across evidence of human civilization 100 million years from now, what impression would they have of our existence?

The late, great Douglas Adams once said: “We don’t have to save the world. What we have to be concerned about is whether or not the world we live in will be capable of sustaining us in it.”

There’s no doubt we face formidable challenges. Rising extinction rates, global pollution and a dramatically changing climate are just some of the many issues that confront us today. Collectively, we tend to focus on the fall-out from these problems in the immediate future, typically over the next few decades. At one level, this isn’t surprising. After all, it’s a timescale that most of us can relate to. It neatly captures our own lives and any hypothetical grandchildren we may have. But from the point of view of a planet that is 4.6 billion years old, we are relative newcomers. With a track record that spans just the last couple of hundred thousand years, humanity has missed most of our planet’s long and colourful adolescence. It is rather depressing to consider just how much longer we might have as a species, but if you take an improbably distant future, a different and far more interesting question presents itself: what sort of evidence for our existence might be left in the geological record?

It is in this context that Jan Zalasiewicz’s *The Earth After Us* provides a wonderfully thought-provoking and fascinating look at the impression we’re leaving on our planet. Zalasiewicz, a geologist by profession, does a fantastic job of setting out what evidence we’ll leave behind in the rocks, taking a refreshing look from the perspective of millions of years into the future when there are no humans. The Prologue immediately grabs the reader — in the

future Zalasiewicz imagines, academia is inhabited by a species of extra-terrestrials who argue over the controversial idea that we once existed. But then comes a discovery that changes everything: an expeditionary force of explorers searching a latter-day Grand Canyon find clear evidence of humans in the geological sequence. Precisely who or what is doing the exploring is never explained, but that is not the issue. The key point is what they discover.

In spite of all our grand achievements, the wheel and New York City, among others, the explorers find just a thin layer of decayed debris exposed in a cliff face — clinching evidence of our presence on a planet millions of years before. Covering the full gambit of natural processes that shape our planet, Zalasiewicz explores what the past has left in the geological record and what this means for the present and future. But this is not a formulaic look at the Earth’s process and history. Because of the massive timescale, all manner of geological mechanisms come into force and are neatly put into a broad view of what has yet to come: the pinnacles of our civilization are washed and ground away so that the vestiges of our monuments make up an urban stratum in the geological record of the future. The environmental destruction we’re wreaking is found sandwiched between evidence of natural change: ancient mudstones preserve abundant grass pollen, testifying to the advance of modern agriculture and what Zalasiewicz describes as our ‘MacDonaldization of life’. Coral reef destruction, ocean acidification and sea level rise leave their mark in other ways, all clearly anomalous to what has gone before.

Through the eyes of explorers millions of years into the future — albeit visitors from outer space — the damage we’re doing is seen to be massive. As their discoveries increase, the neo-Indiana Joneses exploring our planet become increasingly exasperated over how such a ‘great’ civilization could behave in this way.

It is sobering to consider what sort of legacy we’re bequeathing our planet and in this regard *The Earth After Us* is a thoroughly inspirational book. At all levels, it provides a fantastic introduction to the world about us taken from a highly original angle. But regardless of who delves into this book, be it the general public or a student of earth science, one important message comes through loud and clear: we’re increasingly leaving a mark on the Earth. With all our knowledge, can we avert disaster and reduce the effect we’re having? By writing such an accessible book, Zalasiewicz provides a great call to arms. It’s not too late to do something about the dreadful mistakes we’re making. We can listen to the past, change our ways and make our footprint on the planet considerably smaller. To quote Douglas Adams: “We live and learn. At any rate, we live.”

Let’s hope we can learn.

Published online: 4 December 2008

doi:10.1038/climate.2008.133

Chris Turney

Chris Turney is Professor of Physical Geography at the University of Exeter and author of *Ice, Mud and Blood: Lessons from Climates Past*.
e-mail: c.turney@exeter.ac.uk