

The Little Frog That Couldn't (and Other Stories of Control/Loss-of-Control over Earth Processes)

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While co-directing an archaeological project on Maui sacred land, our scientific team did a prayer in Hawaiian each morning before entering the site. This merging of the objective, data-driven realm of science and the deeper time frame that spiritual or emotive associations with the Earth have is not incongruous in our contemporary era. Jan Zalasiewicz - chair of the Anthropocene Working Group of the International Commission on Stratigraphy - noted in a recent exchange that the Anthropocene epoch is one that connotes fear and loss. He stated that scientific concepts like the Critical Zone give us something to 'love', eliciting greater agency. In this discussion, I consider contexts from my own fieldwork and research that entail creative responses from prehistoric people who lived with volcanoes in periods of both quiescence and eruption. Near Merapi volcano in Java, long-held cultural beliefs, customs, and oral traditions are importantly conjoined with science and technology to better communicate volcanic hazards and warnings. In northwestern Patagonia at the coastline of Chaiten volcano and in highland Panama near Volcan Baru, rock art was a way of marking the landscape in ways that are highly enigmatic as forms of communication but seem deeply linked to volcanism. One indigenous story from highland Panama, which has strong parallels to rock art motifs in the area, entails a little frog that failed to prevent a catastrophic eruption event even when it had the ostensible power to do so. The influence of prehistoric interpretations of volcanic phenomena, for me as a contemporary scientist, is upon my sense that - past, present, and future - our curiosity and concern lies with issues of human agency and control in the face of the dynamic, telluric planet. A basic definition of 'sacred' is that which is 'deserving of veneration'; this, as any modern volcanologist knows, can be very different from control.

