

day. At this point, an eventual methane-hydrate warming “could be added on top of the fossil fuel warming”.

About 55 million years ago, the Earth was a much warmer planet with no ice. Orbital changes caused a several million year warming of about 2 to 3 degrees Celsius. Probably under stress by the warming, ocean currents re-oriented in a way that fed a lot of energy up onto shallow continental shelves in the Pacific. In the sediments there lay some 3,000 gigatons of frozen methane hydrates, roughly the same amount of carbon as in all the fossil fuels. Over the course of two separate thousand-year periods, all of that methane was released into the atmosphere. The earth warmed somewhere between 5 and 9 degrees Celsius, with temperatures perhaps 13 degrees warmer than today.

If the Earth’s been ice-free before, then, even though today’s civilization is clearly not long for this world, humanity should still be able to survive, right? Maybe not. Keep in mind that the human car-

consuming civilization as a disease on planet Earth is not new. But now we know that this disease could actually be fatal to the host as well as itself.

The human animal, under the spell of consumerism, responds to the threat of its demise with various forms of desperation: denial, greenwashing, geo-engineering, and now, since we’re so good at global warming, the hopeless idea of terra-forming the planet Mars. Let’s instead keep our fingers crossed that Mother Earth has a few infection control techniques left up her sleeve. Otherwise, the universe is in real trouble.

DOUG MEYER, known to some as ‘Doctor Doom,’ is the Zephyr’s Colorado Plateau Bureau Chief. He lives and waits patiently for the end of civilization (as we know it) near Flagstaff.



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bon punch has happened 10,000 times faster than natural climate forcings. The carbon cycle’s major diminishing feedback (weathering of rocks) requires thousand-year time frames at a minimum to be effective. It isn’t clear how warm the oceans need to be before triggering an even bigger methane hydrate release than the one 55 million years ago. Once started, will the releases happen over centuries or millennia? And global temperature will be even more sensitive to carbon dioxide increases on a hot planet, but by how much?

The answers to those questions will determine the fate of the Earth. Could our blue planet suffer the misfortune of her twin sister? Science tells us that a runaway greenhouse effect can happen when hot humid air traps even more heat, allowing the atmosphere to carry more moisture, which causes further heating in a powerful feedback loop. With no ice on the planet, this could continue until the oceans were completely boiled away. Venus once had oceans of liquid water. Here is our top climate scientist on the possibility:

“After the ice is gone, would Earth proceed to the Venus syndrome, a runaway greenhouse effect that would destroy all life on the planet, perhaps permanently? While that is difficult to say based on present information, I’ve come to conclude that if we burn all reserves of oil, gas, and coal, there is a substantial chance we will initiate the runaway greenhouse. If we also burn the tar sands and the tar shale, I believe the Venus syndrome is a dead certainty.”

Perhaps the American Indian of the Great Plains felt the same on first witnessing that evil carbon-black exhaust contaminating the sky from a coal-fired locomotive. Understanding our energy-

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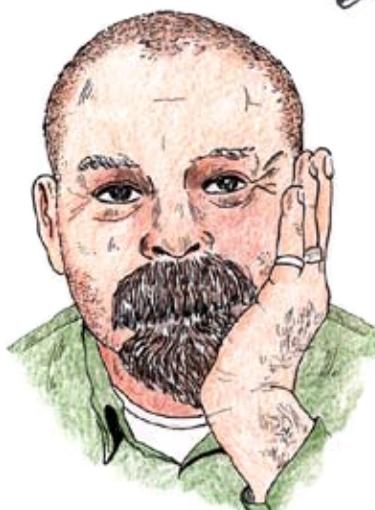


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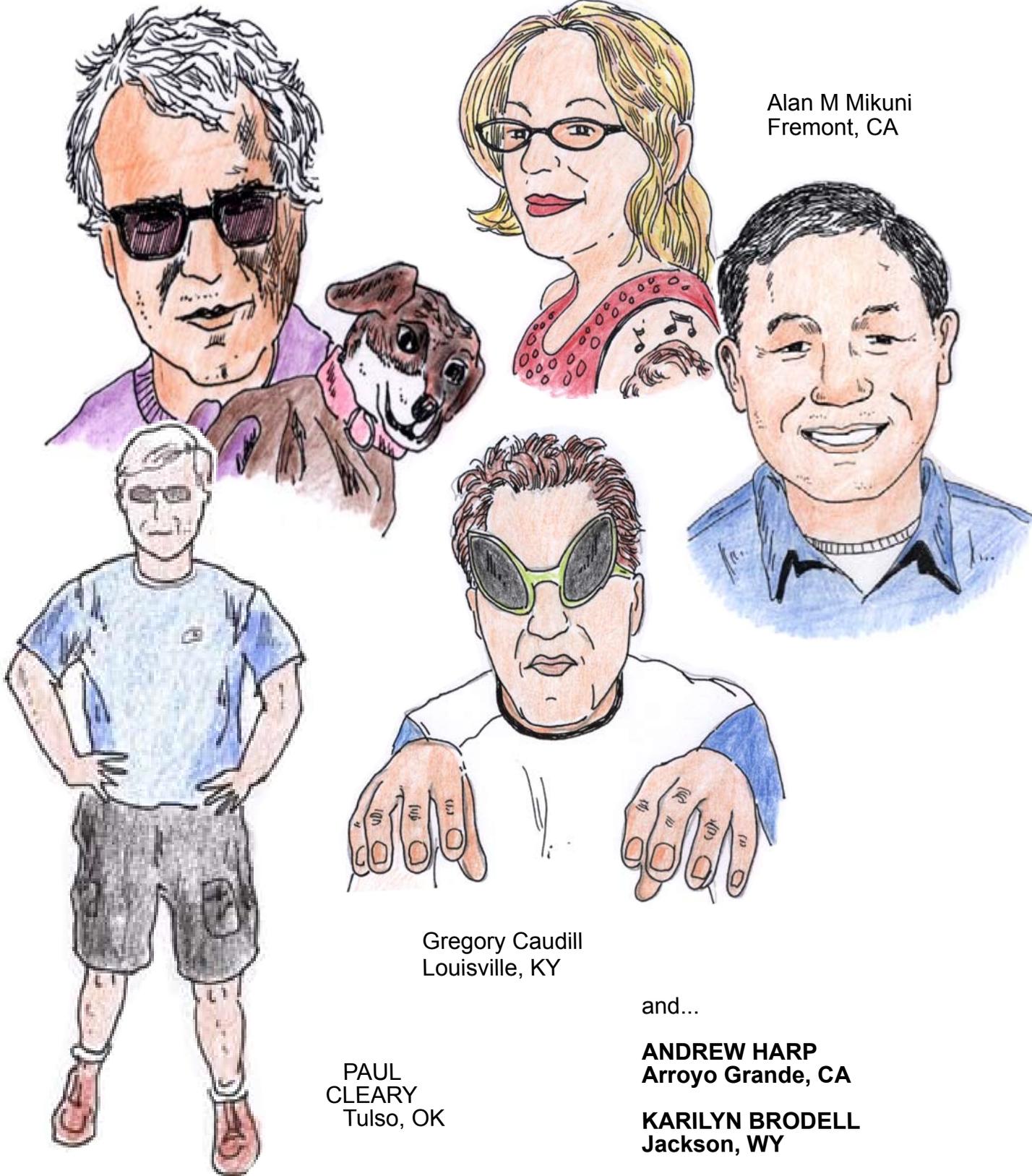
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