



RICHARD KLEIN

STATEMENT

*Walking Not Talking – Nature as Muse*

Superficially, copper and fungi would seem to have little in common with each other. I've been copper-plating organic objects, including fungi, for more than thirty years, but it was only recently that I realized that there were parallels between the red metal and the kingdom of eukaryotic (fungal) organisms. For *Walking Not Talking – Nature as Muse* I'm contributing recent works that are made of electroplated copper that speak of the way that both copper and fungi form communication networks on the planet Earth: from the copper electric and digital grids that encircle the globe, to the filaments of fungi mycelium that connect with virtually all terrestrial plant life. Fungi and their plant partners have been critical to the evolution of life on Earth for what is estimated to be 460 million years, while copper has been instrumental in the development of civilization since its first utilization by humans over 8,000 years ago. The first copper mine established in North America by European settlers was dug in East Granby, Connecticut in 1707.

Researchers at the Unconventional Computing Laboratory in Bristol, England are investigating the idea that fungi can be used to process information by utilizing the electrical impulses that course through their mycelial networks, a line of inquiry that if true, would fundamentally expand our concept of intelligence in the biological world. It is estimated that a teaspoon of healthy soil has more than 300 feet of fungal mycelium, while the average American household has over 3,000 feet of copper wiring, and the typical electric vehicle uses around 180 pounds of the metal. In the last several decades fungi have been acknowledged as being critical to the health of both the soil and the atmosphere, with an estimated 13 gigatons of carbon stored underground in their mycelium, an amount that is roughly equivalent to 36% of the yearly global carbon emissions produced by human activity. This period has also seen an exponential increase worldwide in resource extraction, particularly for copper, for use in electrical infrastructure. My use of copper-plated fungi and other organic materials speaks in poetic terms about the connections we have with the natural world, and how natural and technological evolution have points of convergence. In the present moment use of the red metal is increasing at an unsustainable rate, and research into the critical role fungi play in ecosystems has moved from the margins and into the mainstream.

- Richard Klein, 2025