

The Vital Unseen¹

Bruce Gemmell and Julie Rauer ²

Why are we looking at a painting in a science magazine? As an individual who sees great kinship between art and science, and what I see as their common desire to speculate as an attempt to uncover the nature of what things are, as well as their inherent potentialities—I appreciate this opportunity to elaborate as to how I observe this correlation.

At the outset, let me state that it is not my intention to explain what is art, let us leave that for another time, but to explain that I believe, art has a value not only recognizable and necessary to scientists as much as artists, but to be understood as equally invaluable to the mind of any individual, in any speculative venture—for example, the philosopher, the mathematician, the poet, the musician, the neuroscientist, as well as all others, whose deepest desire which is to simply know, lies at the heart of their work. First, what is at the core of this, or for that matter, any speculative endeavor? In its most fundamental sense, it is to try to understand, and with the aid of imagination, attempt to reveal the secrets and to obtain an understanding of our cloistered nature, in all its forms. Our understanding and our imagination are inseparable, and though the complete workings of that connection may not be readily apparent...it is unmistakable. The paper of the scientist sets out to pose a new understanding of an aspect of nature, and manifests a new world as a result, as the image of the painter will do exactly the same; the tools may be different, but the intent is identical. By proposing a new understanding of certain elements of nature, that reflects across the entirety of nature, or by imagining an anticipation, based on certain conjectures as regards nature, to delineate nature, the speculist, a word invented by Julie Rauer, conjures this new and compelling landscape.

In her painting, *Necessaire For Nod Factors: A Portrait of Soil Ecology and Frankia Symbiosis*, Julie Rauer has peered towards the horizon of what we believe to be, in order to speculate as to what is potentially beyond. So let us start with how this piece is generated, and some of the devices employed to aid in its execution. At the center of this construction is the Forest of Dean, the Necessaire, and what I will call the operation of the metaphor, that will entwine them, as well

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² Essay by Bruce Gemmell written to accompany *Necessaire For Nod Factors: A Portrait of Soil Ecology and Frankia Symbiosis*, a metaphorical science watercolor painting by Julie Rauer. Both are co-founders of Art Science Complex, an organization based in New York City, NY, USA. E-mail: specarch11@msn.com.

as their supporting cast of characters. The Forest of Dean is an ancient woodland in Western England, a Necessaire is what, in French, means simply “necessary”, which are elaborate exquisitely crafted cases which reached their height in the eighteenth century, and held everything from utensils, tools, as well as, in some cases, delicate scientific instruments for individuals when they took to their travels. Given these two main characters, how do they interact pictorially and imaginarily? That is not just how they are placed, but how they are imagined, and a component of the metaphorical operation, but what is that? How I would describe that would be in simplest terms taking concepts, ideas, images, and combining them to generate new concepts, ideas, and images.

So let us look at this construction closely. As we look across the page, we see at the top it to be rife with different structures and below that, as we fall down the page, we begin to see what appears to be an elaborate mechanized object embedded in these structures with what appears to be extrusions of some type. From within the underside of this enchanted forest is placed this object or apparatus, which through its various chambers, appears to be processing various and different objects and elements of myriad sorts of organic entities and properties granted a preciousness by this apparatus—and by that, I mean an essential essence of that from which they come. There are many elements, delineated, some of them being: protozoans, *Frankia alni*, actinomycete filamentous bacteria living in association with *Alnus glutinosa*, *Aspergillus fumigatus*, springtails, a root gall nematode, a centipede, soil green algae, and others. A few of us, if any, will recognize or know of all these creatures, but that is not as essential as what I would call the vital unseen, which is what is most important but likely least recognized. Here, as we view the exotic world of this painting, we recognize that one of the many themes we encounter granted by the metaphorical operation of the Forest of Dean and the Necessaire is what we might call the allegory of a scientific instrument, and so in essence, how much we know about the various characters here, and what we are simply looking at—what is unavoidable, is a captivatingly curious landscape, of a collection of intricately layered complex entities, that propose as we alluded to earlier, and which rests at the heart of every speculative adventure to propose possible new realms, beyond what we believe there to be presently, and invites you to study “Necessaire for Nod Factors,” and potentially find, when plunging its depths, not only some of the many compelling provocations it proposes, but also that it may ignite some of your own. Below, we display the fine art work by Julie Rauer and details of the painting.

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Julie Rauer

Necessaire For Nod Factors: A Portrait of Soil Ecology and Frankia Symbiosis

Watercolor on paper; 19 x 10 5/8 inches; signature date: 29 May 2022.



(Detail)

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