The Honeybee Blueprint Project: Documenting Light, Time and Labor

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Abstract
This project is a collaboration with living honeybees resulting in large works on paper. Each artwork is a life size unique photogram made in the sun (not from a digital negative). These drawings were made using organic components, salt, earth, plastic and the presence of living honeybees and documented via the cyanotype process. The resulting "blueprint" is a record of light, time and labor; in an atmosphere of vast uncertainty. In the fleeting moments that pass during exposure, bees move and vibrate. Their presence is recorded over long exposures. Honeybees are in no way harmed by this project.

This project is greatly informed by professional beekeepers. The Honeybee Blueprint Project explores invisible labor and a changing planet.

Keywords
drawing; cyanotype; photogram; honeybees; bees, labor; invisible; invisible labor; blueprint

1. The Honeybee Blueprint Project: Labor, Light, and the Rituals of Survival

In an era marked by climate instability, mass migration, and collapsing ecological systems, *The Honeybee Blueprint Project* emerges as a reflection on the often-invisible labor that sustains both the natural and human-made worlds. Using the honeybee as a symbolic "worker," this ongoing art and research initiative draws vital parallels between the hardships of honeybee colonies and the broader struggles of humanity, particularly those impacted most by a changing planet.

According to the Apiculture and Pollinator Program at Clemson University (n.d.), honeybees pollinate crops that contribute to nearly one-third of the human diet. Beyond their role in food production, the USDA (2019) reports that the U.S. honey crop alone is valued at more than $300 million annually. Despite their ecological and economic importance, honeybees are facing catastrophic losses. Project Apis m. (2025) revealed that in the most recent pollination season, colony losses exceeded 50% nationwide, with some operations reporting complete collapse. These patterns mirror the earlier signs of Colony Collapse Disorder and raise urgent questions about food security and ecological stability.

But these crises are not isolated to bees alone. Rising sea levels, global warming, and widespread socio-economic instability are unraveling the systems that bind us all. It is, once again, the "workers", both human and non-human, who carry the burden of this collapse. As honeybees vanish, so does a crucial workforce that operates quietly behind the scenes, much like many human laborers whose essential roles often go unseen.

The Honeybee Blueprint Project seeks to make the invisible visible.

2. A Collaboration with Living Bees

This research is created in direct collaboration with living honeybees. Through the cyanotype process I create unique life size photograms using the UV of the sun (see figure 1). These “blueprints” serve as documents of time, labor, and ecological fragility. The creative process incorporates organic materials such as salt, earth, and construction debris, placed on a transparent acrylic surface. As bees interact with these materials, their motion is captured over long exposures, leaving behind glowing orbs that suggest both presence and absence, life and loss. The areas of the emulsified paper around the bees and materials darkens to various shades of blue.

These cyanotypes are not static photographs. They are time-based documents—records of labor, light, and shared effort. The bees’ motion is captured in ghostly silhouettes, suspended between visibility and absence. Working alongside the bees while protected by a bee suit, I experience this collaboration as a dialogue of gestures and rhythms, both bee’s and my own. Both myself and the honeybees themselves never stop moving until the sunlight fades, becoming unproductive to the UV based photographic process. The images are exposed, rinsed, assessed, the set up adjusted and the process repeated. The sun contributes its energy. The bees move with instinctual purpose. My role is to witness and document while shaping the drawing. I add organic materials as the images evolves over the course of time, as bees come and go over the course of many hours. Each piece is ephemeral yet permanent, a moment already passed, now fixed in Prussian blue. What I draw to create each day’s initial image (using organic materials, salt, earth, and construction debris) dictates much of the composition and its ever-changing direction for the rest of the usable daylight. The bees are unharmed in this process. They interact freely and without contact with the chemically treated surfaces beneath the acrylic barrier. The process is informed by professional beekeepers.

Figure 1. “Cosmic Light No.124” Description: Unique lensless photogram via cyanotype process, (organic components, plastic, and the presence of living honeybees) 34 x 26 inches

Figure 2. “Cosmic Light No.180” Description: Unique lensless photogram via cyanotype process, (organic components, plastic, and the presence of living honeybees) 34 x 53 inches

Figure 3. Detail of “Cosmic Light No.180”. Individual honeybees become visible at this distance.

From afar, these works result in atmospheric compositions that blur the line between abstraction and representation (see figure 2). Up close, the familiar shapes of individual bees become visible, revealing delicate details of wings, bodies, and movement(see figure 3). The images pulse with hope and vitality, yet also carry the visual language of ruin, littered with the symbols of human industry and environmental decline.

For more than twenty years, my artistic practice has explored themes of labor, ecology, and the agency of materials, especially those that carry a voice of their own. The **Honeybee Blueprint Project** was born out of a desire to continue this conversation with materials. In this work, honeybees are not simply subjects; they are partners, presences, and metaphors—embodying a complex and fragile relationship between life, labor, and survival. My fascination with honeybees began as a study of their work ethic and evolved into a deeper meditation on their symbolic and literal significance.

3. Continuing a Conversation of process

In many ways, *The Honeybee Blueprint Project* continues the visual and conceptual lineage established by Anna Atkins, who is widely regarded as the first person to publish a book illustrated with photographic images.

Often cited as the first female photographer, Atkins is best known for her pioneering use of the cyanotype process to create photographic images of botanical specimens. In 1843, she self-published *Photographs of British Algae: Cyanotype Impressions*. It's important to note that my research would be impossible without her groundbreaking work.

Her cyanotypes preserved the intricate structures of seaweed, ferns, and flowers with a precision that merged science and art, with an emphasis on the previous. In *The Honeybee Blueprint Project*, I see my practice as an evolution of Atkins' legacy. Like her, I use the same light-sensitive chemistry and exposure to the sun to render fragile, organic materials visible. But where Atkins captured the static forms of plants for a precise scientific representation, my intention in to invite mystery and chaos into the process to expand the viewers possible interpretations.

Architects began employing the cyanotype emulsion (around the year) to copy their building plans, thus leading the term "blueprint". This tradition connects conceptually to the use of construction materials within the visual language of these images. The project speaks to both building and unraveling, a constant state of flux.

4. Ritual, Memory, and the Architecture of Loss

While *The Honeybee Blueprint Project* speaks to the rituals of labor, presence and life, its companion series, *The Medic Project*, turns toward themes of death, remembrance and rest. Inspired by the quiet mourning rituals of honeybees, who carry their dead to the threshold of the hive, and by my grandfather's service as a medic in World War II, this body of work uses repetition and symbolism to explore how loss is processed through both biological instinct and human ritual.

In these pieces, the red cross, long a symbol of healing, is rendered from salt and the bodies of deceased bees (see figures 4,5,6). The image recurs, like a litany, a prayer, a ritual. The red cross becomes a sacred symbol, one that links the silent labor of bees with the invisible acts of care throughout human history.

Worker bees live between 15–38 days in summer, and 150–200 days in winter (Winston, 1987). Their brief lives, like those of many human laborers, are marked by self-sacrifice, cooperation, and quiet endurance.

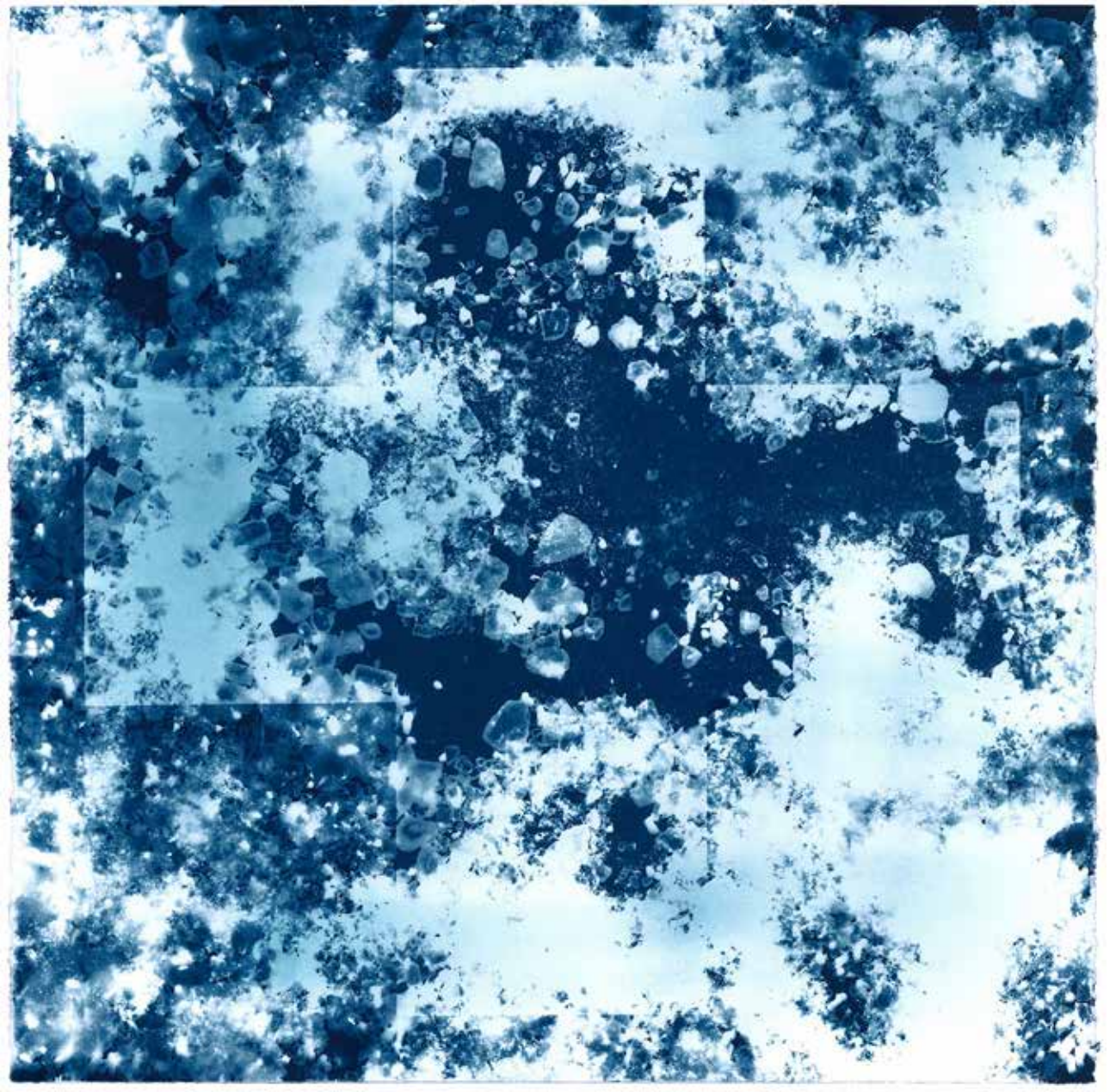

Figure 4. “Medic No.115”. Description: Unique lensless photogram via cyanotype process, (dead honeybees, earth, and salt) 25 x 25 inches

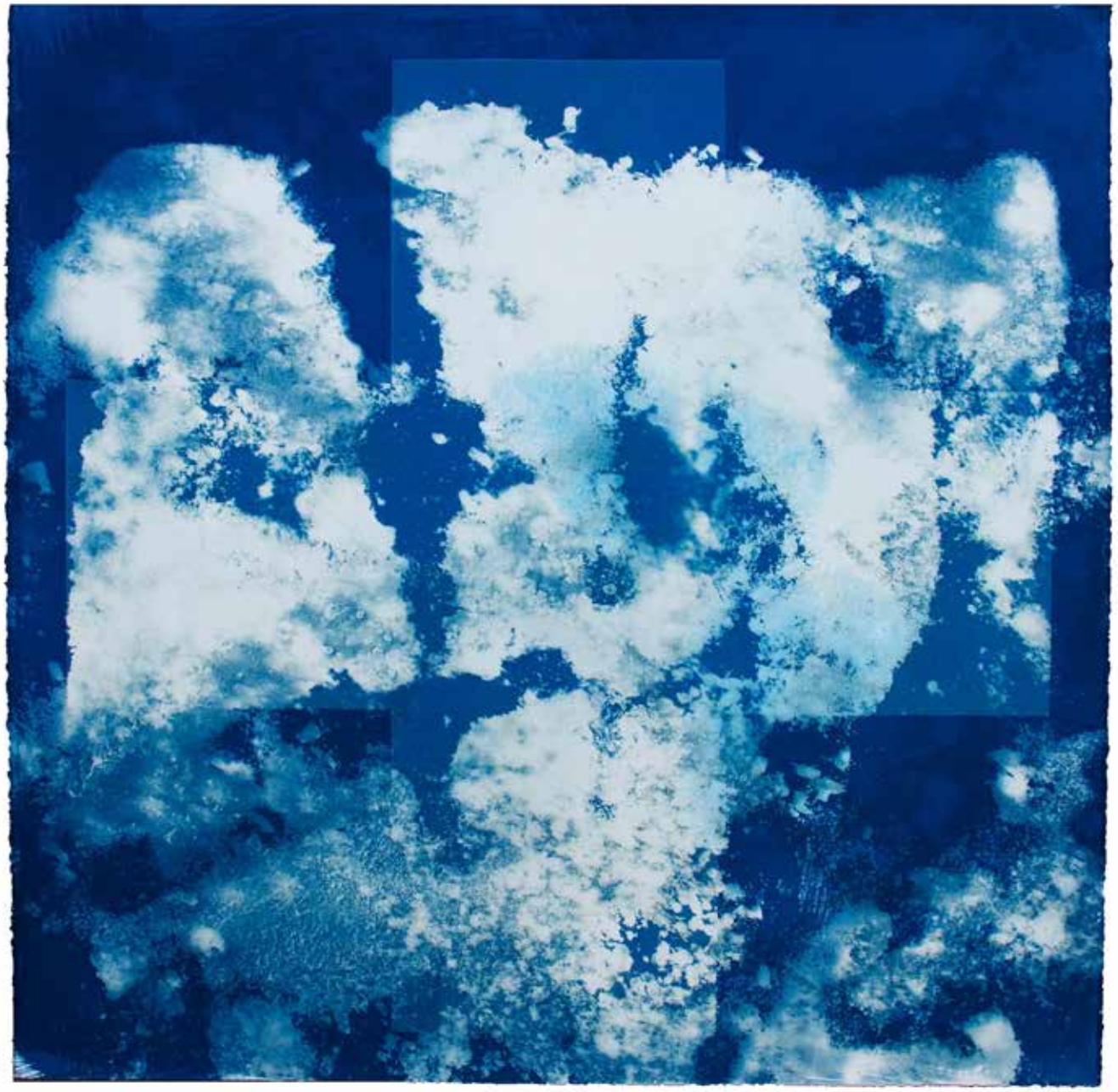

Figure 5. “Medic No.101”. Description: Unique lensless photogram via cyanotype process, (dead honeybees, earth, and salt) 25 x 25 inches

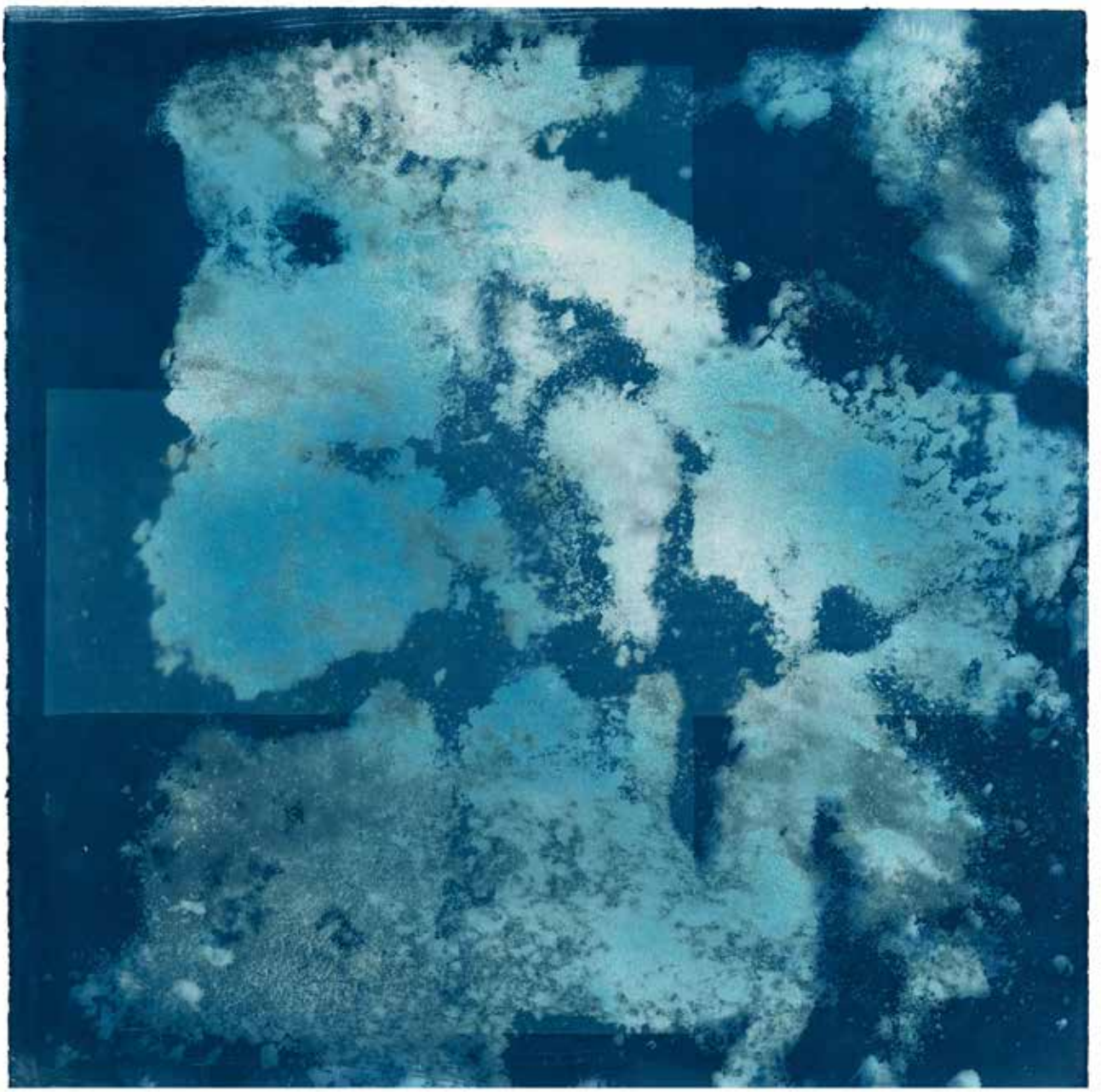

Figure 6. “Medic No.107”. Description: Unique lensless photogram via cyanotype process, (dead honeybees, earth, and salt) 25 x 25 inches

Since its inception, the project has been exhibited across a diverse range of institutions, from major museums and international biennales to academic and regional galleries.

Selected exhibitions include:
2025: Artlink (IN), Bowling Green State University (OH)
2024: Candela Gallery (VA), Lynches Lake Museum (SC)
2023: University of Maine at Farmington (ME), Hodges Taylor (NC)
2022: Mint Museum (NC), Maryland Institute College of Art (MD)
2021: 701 Center for Contemporary Art (SC), Southern Alleghenies Museum (PA), Rhode Island Center for Photographic Arts (RI)
2020: Touchstone Gallery (DC), Avontur (Sicily), Carnation Gallery (OR), OCCCA (CA)
2019: Palazzo Albrizzi at the Venice Biennale (Italy), NOD Gallery (KY), Cressman Art Center (KY)
2018–2017: Humboldt-Universität (Germany), Indianapolis Art Center (IN), Huntington Museum of Art (VA), Site:Brooklyn (NY), Mazur Museum (LA), Ground Floor Gallery (TN), Target Gallery (VA)

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Atkins, A. (1843). *Photographs of British algae: Cyanotype impressions*. Self-published.
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